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THE
COMPLETE
COW-LEECH,
OR
CATTLE-DOCTOR;
BEING
A TREATISE ON THE
Disorders of
HORNED CATTLE;

*Rendered easy to be understood by any that can read a
little plain English;*

WITH
A CATALOGUE OF DRUGS;

By J. C. KNOWLSON,

Who has been Fifty-seven Years in full Business;

(Twenty Years at Skipton, and Twenty-three at Otley.)

In this little Book more light is thrown on the DISORDERS and GENERAL TREATMENT of HORNED CATTLE than in any other that is in print; and their DISORDERS, with the REMEDIES for them, are so clearly explained that every one may be his own Cattle-Doctor: With the best Recipes yet found out; some of them worth TEN GUINEAS each to Cow-Keepers, and all new to the World!

(Entered at Stationer's Hall.)

O T L E Y :

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WORMS OF CATTLE
DISEASES OF THE
CATTLE DOCTOR

Translated from the French of
J. L. L. L.

A CATALOGUE OF BOOKS

BY A. C. EVANS

It has been thirty years in full
of the most recent and valuable

to the most recent and valuable
of the most recent and valuable
of the most recent and valuable

(London: Chapman & Hall)

ST. PAUL'S

PRINTED BY THE ST. PAUL'S PRESS

1850

Introduction.



BY the desire of many friends and acquaintances this little treatise is put forth into the world. Many think it my duty to do so, and indeed it is, for I have none to succeed me in my business as Cattle-Doctor, therefore, for the good of my fellow-creatures I explain to them that which has hitherto laid much in darkness. I trust that the candid reader will bear with my weakness and plain language, as I can appeal to the Searcher of hearts that I hide nothing that I know would be useful. This little treatise on Cattle is written by me when seventy-four years old, and after having been in great practice for fifty-seven years. I have been nearly twenty years at Skipton, in Craven, and twenty-three at Otley. As for my knowledge of the Disorders of Cattle, and how to cure them, it is well known to many, so that little need be said on that head. Several of the recipes in this book are worth ten guineas each, and have been hitherto unknown to the world. I do not mean to ridicule other Cow-Doctors, but I wish some would get to understand their business better. How many Beasts are lost through people that neither know their disorders nor the drugs they give them. I think I may truly say that there is more light thrown on the business of a Cow-Doctor here, than has hitherto been brought forwards; but I leave it for my readers to judge for themselves, and am their well-wisher,

J. C. KNOWLSON.

OTLEY, 1819.

THE DOCTOR

THE DOCTOR OF MARYLAND and a gentleman
of this country is put forth into the world. Many
think it my duty to do so, and indeed it is for I have
sincerely loved me in my business as a Gentleman
therefore for the sake of my fellow-citizens I ex-
plain to them the state of the affairs and in
particular I trust that our countrymen will bear with
my weakness and my language, as I can appeal to
the Doctor of Laws that I am nothing but a Lawyer
would be useful. The little treatise on Civil Law
and the other works of our countrymen, and after that
we have in great measure for the year 1780. I
have been nearly twenty years as a Lawyer, in Great
and twenty-three in this. As for my knowledge of
the Principles of Law, and how to use them, it is
well known to many, and the little need be said in this
book. Several of the topics in this book are words
of praise each, and have been before unknown to
the world. I do not mean to ridicule other Law-
yers, but I wish some would read and understand it
more fully. I have now finished the first part of
the book and know the second part the third part
and the fourth. I think I may truly say that I have
written down the Principles of a Law-Doctor here
and has little to be added to it, and I have
not any reason to beget for the future, and not in
well known.

J. A. KNOWLES

1781, 1812

PREFACE.



ABOUT 20 years ago many people pressed me much to write a treatise on **HORNED CATTLE**, but I then refused, thinking that one of my own family would succeed me in the business; but my hopes are cut off, and it is my duty to do what I can to benefit my fellow-creatures, and I thank my God that it is both in my heart and in my power to do so: for this reason this little book is sent out into the world, and it is my hope that many may be benefited by it. Should it be an instrument of good to one poor man's Cow it will be a blessing, but it may be useful in saving thousands. A true explanation of the disorders, and safe and easy medicines for the cure of them, are laid down in it in the plainest language—not that of a learned writer, but for a poor man's reading. I do not mean to make easy things hard, but hard things easy; and hope that my readers will be candid enough to consider well before they cast any reflections upon it. I do not know that there are errors in it, but possibly there may, considering my old age. I can truly say it is written from experience alone, as there is not one borrowed recipe in it, therefore it must be new to the world; and I have no other motive but to do good.

People should be careful what they give their Cattle when labouring under any disease; for how many will say to such as have a Beast poorly, *Give her such a thing—it has done good to such a one's Cow; and if it does no good it will do no hurt.* But this is a great mistake, for if the stuff itself does no hurt, yet the dis-

order perhaps is not checked by it, and that is doing hurt. Some recommend a boiled sheep's pluck, chopped small, and given with the broth. I am sure nature never formed a Beast's stomach for hogs' meat, and have asked many how it was to work, but they could not give a proper answer. I believe the truth is this:—*The butchers have them to sell, and cannot readily dispose of them; so if they get the round heart off they sell the remainder to some simple man that has a Cow poorly;* for many people enquire of the butchers if they can relieve their Cows when ill. The butchers in general know less of the disorders of Cattle than the Keepers; and some of them are as ignorant about them as a hottentot—they know how to kill them it is true, but I am afraid they kill many that are not fit for the shambles.

When people have a Beast disordered, they generally inform some neighbour, and take advice of such as are very unfit to give it, instead of applying to those who understand the disorder:—this evil may be removed if this little treatise be attended to; for the disorders are described so plainly as to be easily known.

Shop drinks are to be had in many places, for most druggists keep them ready for sale; and it is too common for Cow-Keepers to get what they call a comfortable drink, which is made of a few spices, nearly all of the same nature, and give it to a Beast when in a fever, which increases the disorder instead of doing good; but in this little treatise you will find clear and plain directions what to give in every disorder.

When you buy drugs be careful to get them good, as druggists are not always to be depended on for having good articles. The safest way is to buy them in their natural state, and to powder them as you want them. Do not be too hasty in giving medicines, but let one operate before you give another. Great hurt is often done by being too hasty, for medicines are longer in working off in the Cow-kind than in any other that I know of; and it is from their having four stomachs, and their bowels such an amazing length.

Disorders often get fast hold before they are discovered, and when discovered they are often dallied with a long time before a remedy is sought.

Bad hay and bad water are the cause of many disorders, and many are brought on by neglect.

The constitutions of Cattle differ, and some Beasts are larger than others, but you must judge for yourselves as to the strength of the medicines, as I have laid down the recipes for a middle-sized Beast; but be careful not to make them too weak, for they cannot then have the desired effect.

There is much difference in herbage. In some parts of our land the herbage is much coarser than in others; and where it is coarse and strong, Cattle will require stronger medicines to work off any disorder, than where it is short and sweet. Cattle that are kept on hilly places, where there is plenty of good water, are generally the most healthy, for they are sure to have good air. They are more subject to disorders in low, marshy lands. It is frequently said that small, diminutive

Beasts are not so subject to disorders as large ones; and the reason why they are not is that they are mostly kept on hills, and not on low, rich lands; for reason tells us that the richer the food the sooner disorders come on. The North Britain, or Scotch Cattle are not so subject to disorders as our own, as long as they are kept at home, but when they are brought to our rich pastures, this ceases to be the case.

Most Cow-Keepers allow that Beasts bred at the place where they were calved, are not so subject to disorders as those that are removed; and this will hold good, as a continuance of the same herbage is most likely to keep them in health; but, in either case, they will have disorders, and it is allowed by all that places where there is good water and air are the most healthy.

The Redwater is the most common of all disorders, and more Cattle are lost in it than in any other; and there is cause to fear that many are destroyed by giving too many, or wrong medicines; for foolish prescribers and foolish prescriptions abound. How many recommend things who neither know the seat of the disorder nor how they will operate. My dear readers be careful not to attend to such quackery.

In ancient times, physic was chiefly studied by kings, and philosophers, and the authors of inventions or improvements in it were accounted gods, and often called the sons of god. It was the general belief of the heathen that the knowledge of physic came by inspiration, and Christians formerly held the same opinion; and do at this day if they believe the Word of God:—

Only look at the 9th. verse of the 12th. chapter of St. Paul's 1st. Epistle to the Corinthians. But it is now practised by some that neither fear God nor regard man. They have got the rattle by the end, and they make weak people believe they know something, but in reality they do not. My dear friends, be careful of such people, for the death of a Cow is not only a loss to the owner but to the community at large.

In this treatise you have directions for rearing Calves, and managing them till full-grown. Some people are very careless of their young Calves, and do not mind much whether they lose them or not, saying their milk is worth as much as their price when fat; and they can buy them for little money when they want to breed them: But in my opinion this is a weak way of reasoning, for if the Calf is lost it is for ever lost, but if reared it will be either in the shambles or in the pasture. I wish every Calf-Breeder to guard against the Disorders that are incident to Calves, and especially the Hyan, or Murrain, which has killed many; but if you will follow the directions in this book, very few indeed will be lost, for the recipe is one of the best yet found out to prevent that disorder; and at a small expence too.

I wish again to caution you against taking advice of people who neither know the disorders of Cattle, nor how to prescribe a remedy for them. No man can prescribe proper medicines except he has a true knowledge of herbs, roots, minerals and compounds, and how they operate. The first thing a Cow-doctor

should do when he begins business is to get well acquainted with drugs, and then with the disorders; but these things cannot be done without much practice. Some people are very fluent at the tongue, and if they know the names of a few drugs, and a disorder or two, they blow up loudly, and bring forward the names of the drugs they have learnt, whether they are good for the disorder or not; but in this little treatise there is not one thing mentioned that will not bear the strictest scrutiny.

In many disorders people are continually giving pottage, gruel, &c. with the horn, which hurts the beast very much. Only consider—if you were poorly yourself, how would you like one or another to be pouring stuff down your throat when your stomach was not inclined for it, and before what you had got had operated? Beasts are often treated in this manner, especially in the Redwater; and the last thing given is generally thought to have effected the cure, if the animal gets better, when probably it was no such thing. I am fully persuaded that many Beasts are killed by such treatment.

I now conclude the Preface by hoping that this treatise will be found to contain a better description of the Diseases of Cattle, and clearer and more proper directions for the treatment of them, than any other that has been published.



A Short CATALOGUE of DRUGS for common use.

A

Aloes, Barbadoes.
 Sucotrine.
 Cape.
 Almonds, Bitter.
 Jordan.
 Alum, Common.
 Roach.
 Antimony, Crude.
 Prepared.
 Antimonial Wine.
 Aniseeds.
 Arnatto, Flag.
 Spanish.
 Arsenic, White.
 Yellow.
 Argols, Red.
 White.
 Asarabacca.
 Aquafortis.
 Æthiops Mineral.
 Æther.
 Alkanet Root.
 Arrow Root.

B

Balm of Gilead.
 Balsam Capivi.
 of Sulphur.
 do. Aniseeds.
 Locatel.
 Peru.
 Tolu.
 Guaiacum.
 Barbadoes Tar.
 Bark, Peruvian.
 Powder.
 Barley, French.
 Pearl.
 Bateman's Drops.
 Bay Berries.
 Bitter Apple.
 Birthwort, Long.
 Round.
 Bole, Armenian.
 Borax.
 Brimstone, Roll.
 Flour.
 British Oil.
 Burgundy Pitch.

Black Beer.
 Balm Drops.
 Black Soap.
 Bay Salt.
 Bracken's Balls.
 Butter of Antimony.

C

Calamus Aromat.
 Calomel.
 Camphor.
 Cantharides.
 Caraway Seeds.
 Cardamom Seeds.
 Castile Soap.
 Castor.
 Camomile Flowers.
 Cinabar Antimony.
 Native.
 Colcothar.
 Conserve of Hips.
 Orange Peel.
 Roses.
 Copperas, Green.
 White.
 Coccus Indicus.
 Coriander Seeds.
 Crab's Claws, prepared.
 Cream of Tartar.
 Cummin Seeds.

D

Daffy's Elixir.
 Diapente.
 Distilled Vinegar.
 Dragon's Blood.

E

Elecampane.
 Electuary Diascordium
 Lenitive.
 Londontreacle.
 Mithridate.
 Venice treacle.
 Elixir of Vitriol.
 Eringo Root.
 Epsom Salt.
 Extract of Guaiacum.
 Jalap.
 Euphorbium.
 Fennel Seed.

Fenugreek Seed.
 Flour of Sulphur.
 Mustard.
 Frankincense.

G

Galengal.
 Galls of Aleppo.
 Gamboge.
 Gentian Root.
 Ginger Root.
 Glass of Antimony.
 Glauber's Salt.
 Godfrey's Cordial.
 Grains of Paradise.
 Guaiacum Wood.
 Gum Arabic, Turkey.
 E. India.
 Assafoetida.
 Benjamin.
 Guaiacum.
 Galbanum.
 Laudanum.
 Seed Lac.
 Shell Lac.
 Myrrh.
 Juniper.
 Opium.

H

Hartshorn Shavings.
 Hellebore, Black.
 White.
 Hiera Picra.
 Honey.

I

Impecacuanah.
 Isinglass.

J

Jalap Root.
 Japan Earth.
 Juniper Berries.

L

Lapis Calaminaris.
 Internalis.
 Lavender Flowers.
 Linseed.
 Liquorice Root.
 Litharge.
 Logwood.

Long Pepper

M

Madder

Magnesia

Maidenhair

Manna, Flake

Mercury, Sublimate

Dulcis

N

Nitre, purified

Nux Vomica

O

Oil of Camomile

Fennel

Rape

Wormwood

Almonds

Amber

Aniseeds

Bay, Flanders

Bricks

Cloves

Caraway Seeds

Elder

Exeter

Lavender

Juniper

Linseed

Do. cold drawn

Olives

Pennyroyal

Genoa, or Barber's

Peppermint

Palm

Origanum

Nerve

Peter

St. John's Wort

Sassafras

Swallows

Spike

Turpentine

Vitriol

Worms

Spermaceti

Ointment of basilicon bk

Do. yellow

Do. green

Elder

Marshmallows

Pomatum

White camp.

Ointment of Tutty

Egyptian

Blistering

Green

Mercurial

Nerve

Opium

Opodeldoc

Orrice Root

Oxymel of Squills

P

Pellitory of Spain

Pearl Ashes

Plaister, Blistering

Sticking

Drawing

Diachylon

do, with gum

Mercurial

Melilot

Oxycrosum

Paracellis

Strengthening

Poppy Heads

Powder of Aniseeds

Cummin seeds

Elecampane

Gentian

Galengal

Ginger

Fenugreek

Horse Spice

Liquorice

Turmeric

Salop

Precipitate, Red

White

Q

Quicksilver

R

Red Lead

Resin, Yellow

Black

Rhubarb, Turkey

East India

Rose Water

Leaves

Rottenstone

S

Saffron

Sago

Sal Ammoniac

Saltpetre

Salt Prunel

of Steel

Hartshorn

Tartar

Wormwood

Salvolatile

Sanders Wood

Sap Green

Sasaparilla

Sassafras

Senna

Snake Root

Spanish Juice

Spermaceti

Spirit of Hartshorn

Lavender

Sal Ammoniac

Nitre

Salt

Turpentine

Wine

Squills

Stavesacre

Steel, prepared

Sugar of Lead

Sulphur Vivum

Syrup of Buckthorn

Marshmallows

Rhubarb

Saffron

Roses

Violets

T

Tamarinds

Tartar

Tin Powder

Turner's Cerate

Tincture of Myrrh

Rhubarb

Guaiacum

Turpentine, Common

Do. Venice

V

Valerian

Verdigrease

W

Worm Seed

White Lead

THE INDEX.

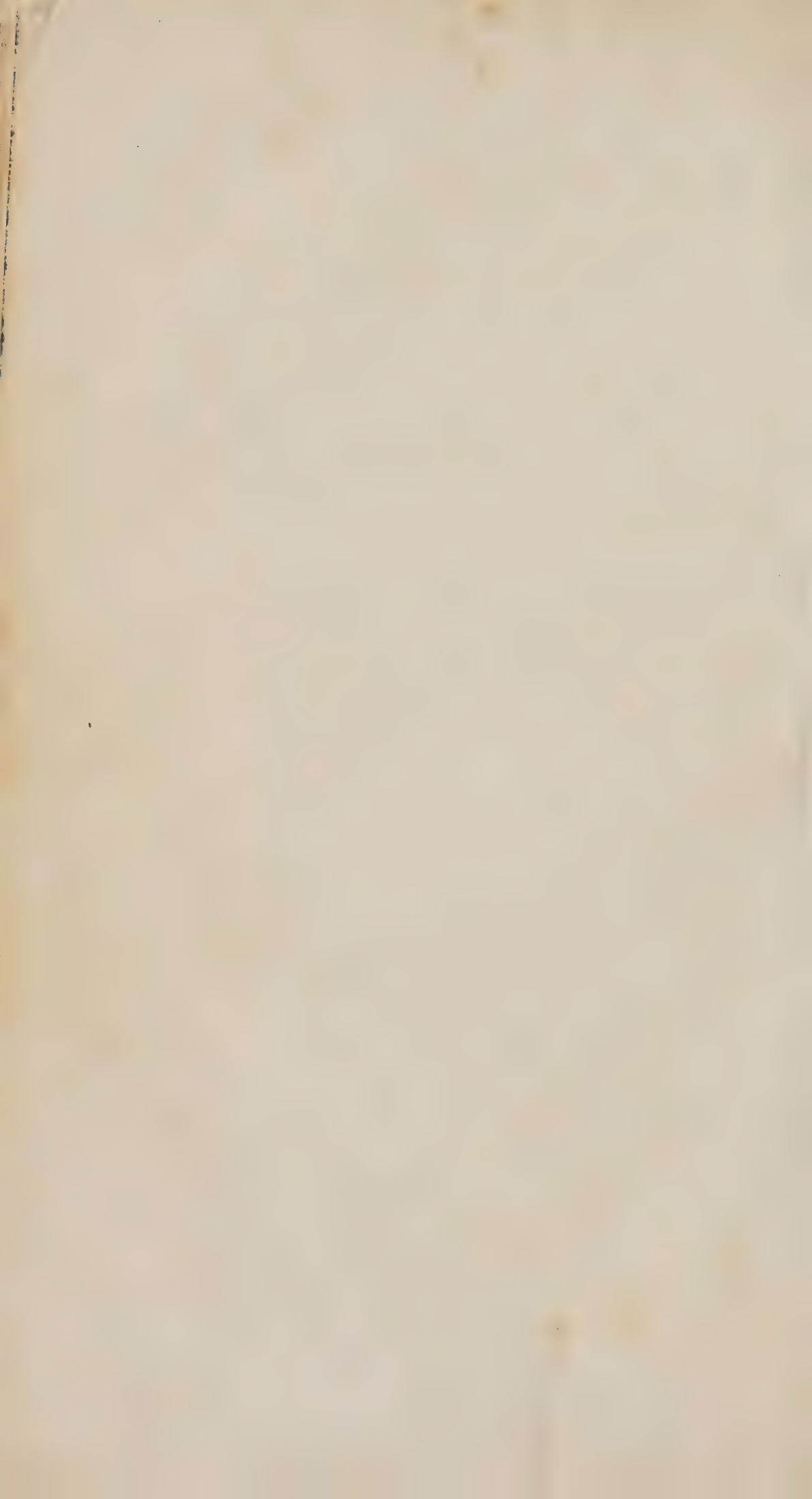
	PAGE		PAGE
The Fog Fever - - -	10	Inflammation of the Liver, -	59
Poison, or swelling in the bowels	14	Looseness, or Rottenness.	60
Poison by disagreeable herbs,	15	To help a Cow in calving,	63
Swelling by turnips - -	16	Inflammation of the neck of the	
Ruminating, or throwing up		bladder, - - - -	68
the meat undigested, -	18	Falling down of the Calf-bed,	69
The White & the Bloody Flux,	19	The Scrophula, or Scab,	72
The Cholic, or Gripes, -	20	Lice in Cattle, - - -	74
The Frenzy, - - - -	21	The Turn, or Sturdy,	75
The Crook, - - - -	24	A Sloughed or Broken Horn,	76
The Asthma, - - - -	28	The Quinsey, - - - -	77
A Hoose, or Cough, -	31	The Foul in the Foot, -	80
A stagnation of blood in the leg,	33	Lameness, - - - -	85
A Chaff in the Eye, -	34	Wounds, - - - -	87
A Lash bite on the Eye,	34	Angleberries, or Anberries,	90
The Yellows, or Jaundice,	35	The Gargil, - - - -	91
The Redwater & bloody urine	38	The Felon, or Hidebound,	93
The Milk Fever, - - -	47	The Felon in the Bag, -	97
A Clap in a Bull, - -	51	Cleansing a Cow after calving,	100
Do. in a Cow, . . .	53	A Drink for taking the Bull,	101
The dropsy, or water tympany,	55	Picking, - - - -	102
Inflammation of the Kidneys,	57	Directions for rearing Calves,	105

Blame in a Cow, 121
a Blast do - 121
To kill Lice do - 125
To cure Stakes do 121
ERRATA. *Felon in a Cow - 122*

Page 45, Line 1, for "Miderale" read Mithridate.

Page 97, Line 14, for "Felon" read Felon in the Bag.





THE
COMPLETE
COW-DOCTOR.

*Of all Creatures in the Creation for Man the Cow kind
is the best.*

HOW many families are supported by this useful creature, the Cow, of which we have in England many different sorts, caused by cross breeds from other countries. I need not enumerate the different breeds; they are so well described by history that a full account may be had of them; but I think it will not be amiss to class the Cow kind together it is so numerous. The first that I intend to explain is our own breed, as being most under our notice. The Urus, Zebu, and Bison are all of the Cow kind, as well as many more, and all chew their cud, or ruminate, in the same manner as the Cow does.

It will not be amiss to shew the reason why they throw their meat back to chew a second time. The great Creator of the universe, who made the Cow, took care to form every thing so as to answer its end, for if they had been formed to live upon other animals, there

would have been little or no chewing the cud.

This useful creature is the greatest support to many poor families, and has been more so in times past, when the commons were not inclosed, for I have seen commons, or waste land, lay almost to every village, where the poor could keep a Cow or two at very little expence; but now the land-owners have deprived many of that comfort: still the Cow is the greatest support to many, for they have the use of the milk for themselves and their children, then the butter and cheese, and when the Cow has calved and got fat it is used for food. Animals of the Cow kind ought therefore to be most taken care of, as they are the most useful. Much more might be brought forward, but let this suffice.

The Cow is made with eight cutting-teeth on the fore part of her lower jaw, and when about 16 months old, two of the middlemost fall out; at 22 months the two next them; in six months more two more, and at four years old a full mouth: at the same time the horns fall of, and others grow in their place.

To know the age of a Beast observe as follows. I have shown you the falling out of the teeth, but here I make another remark, that the Cow's teeth are broader, of a blacker colour, and a full mouth at four years old; and then the horns begin to grow. A Cow has a full horn at four years old, but it grows larger every year; and for every year's growth, leaves a wrinkle round the horn's root, beginning at four years old, for they are not easily discovered before.

A Cow's tongue is prickly and horny at the small

end, on the upper side, which she gathers her food with. When feeding, she thrusts out her tongue, winds up the grass, and brings it over her fore-teeth; then lifts her head a little and breaks it off, throws it into her gullet, and swallows it whole, and so proceeds till she has got her stomach full; then lays her down to throw it up again, to give it a grinding with her grinding-teeth, commonly called axleteeth.

Nature has furnished the Cow, above all animals, with an appetite for coarse and simple nutriment, and has also enlarged her intestines, for this creature has four stomachs, which I do not remember having ever seen mentioned in any Cow-doctor's book.

The first stomach is called the paunch, or great belly, which receives the food, after it has been slightly chewed. The second is called the honeycomb, and is so nearly connected with the other that it may be called a part of it. When these stomachs are pretty full the beast lays down to ruminate, and the grass which it has got begins to heat and swell, which very often forces the food up the gullet again, which may be called throwing up, yet without pain. Clover, [too much being taken at a time,] by heating and swelling has killed many a Cow; and would have killed many more, had they not been found in time, and by those that knew how to cut them. Between the second and third stomach is a short, strait passage, through which most of the juice is forced into the third stomach, but the rough meat which cannot pass, is returned again two or three times, till it is small enough.

The third stomach is called the manyfold, and the food undergoes a strong operation among the shelves and flaps which it contains. In fevers, I have known the hay, or grass, which goes through the small passage into the manyfold, become hard and dry; the heat of the body having dried up the juicy matter; so that I could wish all people that have a Cow in a fever, to give her something loosening to pass on to the third stomach, to prevent the food from growing dry therein.

The fourth stomach is called the wide-gut, and is the beginning of the intestines, which are in length, between the stomach and the fundament, thirty-seven yards, more or less, according to the size of the beast.

Nature has formed this ruminating animal quite different from the horse, which does not chew its cud.

From the fourth stomach the bowels are strong and fleshy, and wider than in any animal that does not chew its cud; but all that chew the cud are nearly the same.

The climate and pastures of Great Britain are excellently adapted to these animals, and the verdure and fertility of our plains are perfectly suited to its manner of feeding; for, wanting the upper fore-teeth, it loves to graze in high, rich pastures, in which few countries excel our own.

Little regard seems to be paid by this animal to the quality of its food, for it makes no particular distinction in the choice of its herbage, but indiscriminately and hastily devours all. For this reason, in our pastures, where the grass is rather high and flourishing,

the Cow thrives well, indeed there is no part where they milk and thrive better than with us, for our pastures supply them with abundance, and they in return seem to throw back more than they take from the soil; for it is well known that where horses, or sheep are put, the pasture grows worse every year, but that where Cows are kept, the land becomes richer and fatter every year.

This Animal is formed by nature to bear cold, for in many parts of England they lay out all winter, and are not taken in at any time, unless they are ill. In some places they are housed in the winter season; but I would advise those that keep their Cows in the house not to keep them too warm. Open shades are the properest places to lay their Cows and young Beasts in, provided there be a fence, or screen against the north and east winds, which are dangerous for bringing on disorders, especially the Crook, which is a heavy disorder in many places where they lay their Cattle bare, and exposed to the north-east wind.

Some people will lay a Cow in a stable where there are two or three Horses, with the place closed up, which must be very unhealthy for a Cow. I should rather choose an open place, such as a cart-house, than lay a cow among horses in a warm stable, for in my time I have known Beasts suffer much from such treatment; nay, even lose their lives. I am of opinion that beasts are seldom too cold; only screen them from the north and east winds, and keep them dry.

I do not know a greater grievance, or any thing that

is more dangerous for a Cow, than to lay it in a place which the rain drops through; therefore in shades, or houses endeavour to prevent this.

In some places the pastures lay at some distance from their houses, and they send a boy, or a girl to fetch up a Cow to milk, perhaps near a mile, twice a day. What hurt this may do to the Animal I cannot say; but if one would go to milk it where it is, it would save two journeys a day for the youngsters, and two for the Cow; and I am certain it would be better for the latter, and no worse for the former.

When Cattle are put to their summer pastures they ought to stay there, provided there be sufficient water for them; although I do not commend carrying water if the Animal can fetch it for herself, as most men and women are fond of indulgence, and perhaps might carry little enough, to save themselves, and give the Beast a scanty allowance: besides most Cows are nice in their taste, and do not take it freely out of a pail, but had rather chuse for themselves. Another misfortune by sending boys and girls is that they dont milk the Cows clean; so that all owners of Cattle should be very careful who they employ, and not trust too much to children.

I have known young people, and even some that have come to age, but not to reason, that have gone in summer time once or twice a day to milk, when the Cows have been in the Red water all the time, and they have not discovered it till they could get none: they say, *I think the Cow is poorly, or, Somebody has milk-*

ed her, for she gives no milk. How soon may a Cow be lost, or an ill report set on foot, by such misconduct as this; nay I have even known a poor inoffensive hedgehog brought into the blame. Would a man of reason suppose that this small animal could suck a Cow? No; its mouth is not calculated to hold a Cow's pap.

It sometimes happens that if a Cow is not milked clean, one quarter, or more, of the bag becomes inflamed by this neglect, and then they say she has laid on a pismire hill, or on a bunch of nettles. I do not say this is never the case, but I say it seldom happens, and the other too often. Sometimes the Beast has a sore pap, and is uneasy to milk, for nature has given feeling to every creature; but the truth is, that the young men or women are more afraid of themselves than the Cow, and leave the milk in the pap, excusing themselves by saying that the bag is bigger from the soreness of the pap; but in reality it is for want of milking clean.

Beasts feeding in summer pastures should be looked at every day, but sometimes they are neglected. Servants will go to see if they are there, but not notice whether they are well:—if there be the number, no more thought is taken for their safety. Masters ought to examine their Cattle themselves, if opportunity permit, or employ a herdsman that they can trust, for Beasts are subject to many disorders and misfortunes, and should be well examined every day, for, to check a disorder at the first onset is half the cure.

I am going to add another remark or two: at the

latter end of summer, when Cattle are put into clover, or fog fields, let them stay in a short time only, not quite to fill themselves. This done a few times, for about a week together, would save the life of many; for what is it that causes them to swell so much with clover, but eating too much? and the clover received into the paunch, gathers heat and begins to swell, till the stomach cannot contain it, and then it is said that the Beast is burst by clover.

It is the very same thing that causes the Fog fever; but fog not being so easily fermented as clover, (being of a dryer nature,) brings on an inflammation, and flies to the lungs.

When you bring your Cattle into the house be careful to examine the stand, that there be no small stones to bruise their knees, at laying down or getting up, for I have seen many a great grievance in Beasts' knees from this neglect; also, be careful to round the stones that form the corners of your group, to prevent them hurting their hind legs, for I have known many a one receive very great damage by neglecting it, especially if the stand was too short.

As I have given you a few remarks to guard you against them, I proceed to explain the Disorders incident to Cattle, and the proper treatment of them, for proper treatment is half a cure.

I desire you, above all, to avoid giving too many medicines, or using every medicine that may present itself. I very well know that there are many pretenders, but few truly understand either the disorders or

the medicines they prescribe, and how is a man or woman to prescribe proper medicines that neither knows the disorder nor the nature of the drugs they give.

A man ought to be fully acquainted with the drug business, so as to understand the quality, as well as the quantity, and how they will operate, whether by stool, urine, or perspiration; also to be certain how far the disorder is advanced. Another thing to be considered is the age and constitution of the animal, for a strong, healthy Beast can bear as much more as a weak one. A Beast under three years old is to be treated as such, as its bowels are tender: as for a Bull, there has been nothing said on that head, but I recommend people to consider them in the same manner, for a Bull, or an Ox, turned four years old, and proportionate in weight and strength, can surely bear more physic; but more will be said on this head in its place.

There are some little diminutive creatures of the Cow kind that are very small indeed, and their intestines in proportion.

Having given you a small account of their frame in breeding, I shall turn to explain the Disorders of Cattle; but, before I begin to treat upon physic, I advise all to be sparing on that head, and to use no more than is needful, and also to be careful to get good drugs, or they will not answer the end, for there are many sellers that neither know the drugs nor the use of them; and druggists are so numerous that they are flying into all the grocers' shops to sell their drugs,

to get gain, to such as do not understand them; then they can put off any thing in the form in place of the drugs, for compounds are not easily known even by experienced people, much less by those that are ignorant of them.

THE FOG FEVER.



The Fog fever, or Fog-sick, is a disorder which happens in autumn, but scarcely any time in the year besides, and is well known by many but not by all; therefore I shall describe it as well as I can. The cause chiefly is, taking too much fog into the first stomach, which swells and ferments, and forces itself forward to the second, and cannot pass any further but is forced back again, which brings on a heat, and presses so hard upon the artery that leads from the cavity of the heart to the lungs, or lights, that it causes the lungs to blow up to a larger size than usual; then comes on a panting and heaving in the flank, shortness of breath, thrusting out the head, wind forcing up the gullet, or throat, and coughing or belching every two or three minutes; after the cough has ceased, the Animal becomes a little easier for a short time:—this is the first seat of the disorder. After this the Beast grows stiff in its hide, dry in its nose, works more in its belly, loses its milk, and becomes weaker.

I have known Beasts continue in this disorder for ten or twelve days, but gradually get worse after the

fourth or fifth day, there being so many large and small pipes in the lights that they may be blown up nearly to any size. A Beast that has a narrow chest suffers most in this disease, the lights forcing themselves so hard against the ribs and midriff as often to cause great uneasiness to it, mostly forcing its dung, and often in small quantities. Care must be taken not to drive the Beast too fast in this disorder, or it will drop down dead.

Endeavour to screen Cattle as much as possible from the cold north and east winds, and particularly from the north-east, for that often is the means of bringing on this disorder, as it first dries up the pores of the skin, then dries the fog, and the fog being bad and dry causes this disorder to be more prevalent. If the season in autumn be warm and temperate, and the fog good, there is not half the number in this disorder, but high, strong winds often augment it.

Dry frosts inflame the lungs, also white frosts; but if the weather be mild I would not advise any to take their Cattle into the house the first three or four days: dry meats are very pernicious. I have known some take a Cow in at night, give her hay, and turn her out again in the day-time to the fog; but giving hay and then grass, is quite contrary to reason: only consider how the stomach of the Animal is made, and then glance at the disorder it is labouring under.

If the Beast gets no better during the first three or four days, it must be getting worse. Be careful to examine the pulse, and should it be high, quick and

strong, take three or four pints of blood in twenty-four hours, and if the pulse continues so take more blood, but not quite so much as before.

When you find the Beast beginning in this disorder give the following:

- 2 oz. of Castile Soap.
- 2 do. Liquorice Powder.
- 1 do. Elecampane Powder.
- 1 do. Salts of Tartar.
- 2 do. Spanish Juice.

Cut the juice small, and give it a light boiling in three pints of water, till it be dissolved; then cut the castile soap small, and put it in the water with the juice while the water is hot, and when near cold give all together: be careful to get your castile soap genuine, as there is so much deception in that article that it is hard to come at the true kind. Get two or three turnips, skin them, cut them into thin slices, put them in a pan, and cover them with water; then boil them till soft, and add two ounces of butter. When near cold give all together, and repeat it every day till better. From the fourth day to the sixth give the following:

- $\frac{1}{2}$ oz. of Gum Scammony.
- 2 do. Lucatellas Balsam.
- 2 do. Salts of Tartar.
- 10 grains of Calomel.

Powder the gum small, dilute it in soft water, and give it about milk-warm: repeat it only once a day.

On the sixth or seventh day there will be a change

in the disorder, and great danger of its turning to a mortification. Should that take place, the Beast will have a low, quick, and very irregular pulse; it will lower its head, turn yellow in the whites of its eyes, discharge a yellow, glueish matter at its nostrils, and work more in its body, but not heave so strong; it will also grow weaker, and mourn much. In this case, which does not often happen, give the following:

1 oz. Peruvian Bark.

$\frac{1}{2}$ do. Saffron.

Give it in elder-berry wine if you have it, if not, in white rose-water. I again request you not to stir your Beast in this disorder if you can help it; for change of air will hurt it, and stirring it cannot bear: be careful to add the turnips every day, and keep the Animal clean, and neither too hot nor too cold, and let whatever you give it be of a diluting nature, and not too much of it. I could wish some person to hold a quart of hot vinegar under its nose for the steam to go up the nostrils and cause a discharge from them, for that is the way by which the disorder of the lungs is relieved.

Keep the Beast covered with a cloth, but not too warm. Some people will think it near dying when it is almost well, for the disorder both comes on and goes off suddenly.

Should the Beast turn very loose in its dung, do not be hasty in stopping it, for the disorder is often cured by a looseness, but seldom by urine: much might be said upon this disorder, but I do not mean to enlarge the book more than is necessary, nor to clog the disor-

der with many medicines. Some lay down one receipt after another, and the best last, as they pretend: why do not such persons put the best first, and leave the others out? although I will allow that some medicines will do for one and not for another. The medicines here prescribed are for a middle-sized Beast, for a stronger add a little more to them, or for a weaker diminish according to its strength.

POISON, OR SWELLING IN THE BOWELS.



This disorder is nearly the same as eating too much clover, though it is not clover that causes it, but too much herbage being thrown into the first stomach, which heats and swells before it is thrown back again, and when the weight presses upon the artery or blood vessels it causes a stagnation of the blood, or what is called a stoppage of blood, and in this case, unless found in time, the Animal will soon be dead.

The first thing to be done is to let blood pretty freely, then give a pint, or three gills of sweet oil, or pale rape oil; or, if that cannot be got, give 10 or 12 ounces of melted butter. If the Beast be able to walk, walk it about a little, and if that will not answer the end designed, stab it with a knife an inch broad at least; if broader no worse, as the place, or orifice, where it is cut, is seldom too wide, but mostly too small: be careful to keep on the loin, for when the Animal is so swelled it is very deceiving: the right

place is *half way between the rib and the huck bone, on the contrary side to that you milk on.*

After the wind has got out, cover the hole with a plaster of any sort to keep it from letting wind in, and when the disorder has subsided, put a strong pin across the wound, and tie it close with a strong thread; then lay on a plaister made of burgundy pitch.

POISON, BY DISAGREEABLE HERBS.



This often happens in some parts of our land, where grows what is called wild saffron, deadly nightshade, foxglove, hemlock, or yew: any of these will cause a Beast to be disordered, or even take their lives if not assisted: to know the disorder observe the following. It will swell in the eyelids and lips, also in the barren and the teats of the bag, the body will swell in some places very much, and in others not so much: these are the most certain marks when a Beast has received poison, and if not assisted the disorder often proves fatal: many will give eggs and chamberlye, but in my opinion they are neither of them likely to give relief in this dangerous case.

When you find a Beast in this disorder bleed it well, and give six ounces of castor oil; if that is not at hand give a pint of sallad, or pale rape oil; and if these cannot be come at melt eight or ten ounces of butter and give it in gruel. I have known fat, from the top of broth where fat meat has been boiled, assuage this dis-

ease, but I wish all that have Cows to keep sweet, or pale oil by them. (Pale oil will answer the same as sweet in many cases.)

When a Beast has received any of the pernicious herbs before mentioned, especially the yew tree, it has not done with the disorder when the swelling is assuaged, for yew is hard of digestion. and will not soon pass the second and third stomachs: the other herbs mentioned are also hard of digestion, therefore I advise every person that has a Beast which has received any of these pernicious herbs, to give them, when the disorder is a little abated, six or eight ounces of oil of castor, which will entirely carry off the offensive herb-
age.

I have heard many people say that a mouse's nest, or the moss of a thorn will cause this disorder, but I could never find any that would affirm it for a certainty.

Turnips are so well known for stopping in a Beast's throat that I need not say much on that head: they will cause a Beast to swell much, by sucking wind down the gullet into the first stomach. I have known a pint of pale rape oil carry them down, without the use of a turnip rope. I would advise all that are in the habit of giving turnips, either to cut them small enough, or not to cut them at all, for if the Cows cut them to pieces themselves it seldom happens that they stick in the gullet. Many Beasts are much disordered by turnips, for in spring time people will house their turnips to keep them from the frost, and when they come to lay in the house for some time they lose their juicy na-

ture, and grow dry and fuzzy. Giving them and straw causes hard digestion, for the turnips cannot be thrown back again to have a second grinding, so that they often lay in the second stomach till heat dissolves them so that they can pass on to the third. At the same time the Beast refuses its meat, looks fuller than it ought to do, for what it eats, dungs little, and what it parts with is stiffer than it should be, lowers its head, and is restless to steer: in this case I advise you to give the following, to carry the load from the second stomach.

8 oz. Glauber's Salts.

$\frac{1}{2}$ do. Jalap.

1 do. Cream of Tartar.

1 do. Powdered Ginger.

Put the ingredients into a pot, and pour a quart of boiling water on them, and give them nearly cold: this being for a middle-sized Beast, add or diminish according to the strength of your Beast, and if it is no better in twenty-four hours, give the following.

4 oz. Salts of Tartar.

4 do. Epsom Salts.

Dissolve as above in hot water, and give water three or four times a day till better.

I have known great damage done by turnip-ropes, when used by unskilful people, and many a Beast lose its life. I have a great opinion that a small pliable willow, about the thickness of a small walking-stick, with the end you put down the gullet wrapped with tow, or a soft rag, made fast that it may not slip off, would answer. The stick should be four feet in length;

and when it springs against the gullet it must be easier for that tender part than a rough rope tearing the inner skin, and in danger of bringing on a mortification: but, whether you use a stick, or a rope, be careful to grease well with hog's-lard, or butter: but I am certain that oil will often carry turnips down, as mentioned before; and if not, they will go down much easier with oil than without it.

I would advise all that use turnip-ropes to have strength to hold the head, and to keep the head and neck as straight as possible, that is, to keep the nose well out; and neither to be too hasty in their work, nor too long about it; for when people are fluttered about any thing it is not often done well.

RUMINATING, or THROWING UP THE MEAT UNDIGESTED.



This disorder is so well known that it needs little explanation, and as I have mentioned the cause I need not go much further on this head, as any man or woman that looks at a Cow will perceive when the meat is thrown up again, and a deal of slaver and water lies before its head. This is chiefly owing to losing its cud, and that chiefly to overloading the stomach, which brings on a fermentation, or inflammation; but it is not to be called a dangerous disorder, although I have known Cows continue three weeks in it.

The remedy is, to get the cud as soon as possible, but

this cannot be done till the first and second stomachs are emptied, and the contents forced into the third, for which purpose I advise you to give the following.

- 4 oz. Salts of Tartar.
- 4 do. Cream of Tartar
- 8 do. Epsom Salts.
- 2 do. Powdered Ginger.

Dissolve the above in hot water, and give it nearly cold; and warm water two or three times, till it is wrought off. Fresh mould and salt, (about 8 ounces of each,) dissolved in a little cold water, will be a means to get their cud. If the Beast does not get better, give the above medicine a second time at three or four days distance: the salt and mould need not be given till the third day after the medicine.

FOR THE WHITE, AND BLOODY FLUX, COMMONLY CALLED LOOSENESS, OR SCOURING.



This disorder is very common among Cattle, and weakens them very much. It is soon discovered by their dung; only in the White Flux it has no blood among it. This is the first stage of the disorder, but if it continues two or three days the Bloody Flux comes on, when their dung is very thin indeed, and they often part with the inner skin of their small intestines, which is commonly called parting with their puddings.

A Beast in this disorder loses its strength very fast, its eyes are sunk in the sockets, it hangs its head, and is very listless to steer; its skin wrinkles, and its pulse

is low and uneven, and if stirred it is in danger of coming down. Give the following.

2 oz. Tormetil Root, in Powder.
 4 do. Bole Armenian do.
 1 do. Grains of Paradise, do.
 1 do. Turmeric, do.
 2 do. Best Madder.

The above must be given in oak bark tea; to make which, boil a handful of oak bark in two quarts of water for twelve or fifteen minutes, and let it stand till cold, then clear it through a strainer, and mix the above with the liquor. Red wine would be much better, but it is so expensive; or a pint of common brandy, and a pint of water will answer full as well as the oak bark tea in this disorder. The Beast will want support, therefore, if it refuses its meat, make it some wheat-flour pottage; but be careful to let your wheat be sound, or it will do more hurt than good, and if the Beast continue ill, give the following. One ounce of isinglass, dissolved in one quart of hot water; add four ounces of arrowroot, and a quart of blue milk: boil it lightly, and give it nearly cold: should the mucilage be too thick to give with a horn, add a little more blue milk. If the Beast is brought very low, and the disorder still continue, give a pint of tincture of rhubarb, in a little warm water, and let warm water, with a little meal upon it, be given all the time. Keep the Animal warm, and stir it little.

THE CHOLIC, OR GRIPES.

This disorder is attended with a strong sensation in the bowels; the Beast lays down, and quickly gets up

again, strikes against its belly with its hind-feet, and looks wild with its eyes; and sometimes the pain is so strong that it would run at any thing near it; it also looks towards its belly, and throws its head upon it.

This disorder is mostly brought on by sour grass, bad hay or straw, water which comes from iron-forges or iron-stone, a sudden change from heat to cold, or snow-water. The remedy is as follows.

- 1 oz. of Tincture of Opium.
- 2 do. Spirits of Sweet Nitre.
- 2 do. Tincture of Senna.
- 1 Pint of Mint-water.

Give all these together, and you will have a cure in two hours. I have in my time, especially in these last thirty years, hardly ever found it fail at the first giving, and the trials have been many; but, should it fail, repeat it in three hours, and be careful to give warm water two or three times after, for it always leaves the bowels tender.

THE FRENZY, OR INFLAMMATION OF THE BRAIN,



This is a heavy disorder among Cattle, and is a long-continued acute fever, the symptoms of which are a constant watching, raving, a disturbed and frightful countenance, small signs of madness, a strong pulse, and much trembling and slavering. I do not know a disease more distressing to a Beast, nor one more to be feared, for it is hard to distinguish from madness. The animal is nearly blind, and often tosses its head,

till at last a lethargy, or sleepiness, comes on: the eyes look red, from the violent pain in the brain, the urine is of a high colour, and the dung black and tough, and very little at a time. The Beast will stand much, and a thin rheum will pour from its nostrils.

The first thing to be done is to bleed well, which repeat as often as you think proper. Keep the Beast from light as much as you can, and put it in some place by itself, for it cannot bear any noise; indeed I do not know that any thing will be more hurtful to it than noise. In this disease it takes every thing for an enemy: in fact, it is the worst disorder to deal with of any Cattle are subject to. As I have observed that the first thing is to let blood, take three quarts from the neck, more or less, according to the strength of your Beast; then give the following.

2 Drams of Calomel.

2 oz. of Castile Soap.

1 do. Jalap Powder.

Boil 2 ounces of valerian root in 3 pints of water, when nearly cold, strain it off, and mix it with the above, and give all together, but be careful to cut the castile soap small. You may think that the above is a strong medicine: so it is: but it will thin the blood soon, and strong disorders require strong medicines. In a continuance of the disease the Animal sometimes swells much in its vives, (the parts that lay between the ear-roots and the jaw-bones;) sometimes it is jaw-locked, so that nothing can be got in with a horn, then recourse must be had to a bladder and pipe, to force

the medicine down its throat, and when the swelling appears, be sure to rub well with the following.

- 2 oz. of Spirits of Sal-ammoniac.
- 2 do. Oil of Bricks.
- 2 do. do. Turpentine.

Shake the bottle well up, and rub well the part affected.

The next stage of the disorder is dulness, a low, uneven pulse, shortness of breath, the head hanging down, and stiffness in the limbs, when the following should be given.

- 1 oz. of Camphor, (dissolved in Spirits of Wine.)
- $\frac{1}{2}$ do. Gum Guaiacum, in Powder.
- 1 dram Dyaportix Antimony.

Give these in a pint of white wine, but if the disorder continue as in the first stage, give the following.

- 1 dram of Opium, in powder.
- 1 oz. of Camphor do.
- 1 do. Gum Myrrh.

If you cannot powder the first two articles, beat them into a paste, cut them small, and give all together in a pint of valerian tea, or barley-water. If the Beast be stiff in its dung, give the following.

- 4 oz. of Epsom, or Glauber's Salts.
- 2 do. Cream of Tartar.
- $\frac{1}{2}$ do. Jalap Powder.
- 2 do. Lenitive Electuary.

Dissolve all together in hot water, and give it near cold. This disorder is sometimes of long continuance. I have known some have it a month. Sometimes there

is such a strong inflammation in the brain as to bring on a mortification, which causes death; and sometimes a slight mortification, which may be called a vertigo. This is chiefly caused by the blood running thick in the vessels in the brain, (which are commonly called nerves,) and causes a swimming in the head, dizziness, blindness, dulness of hearing, and a stupid disposition. In this case, get some asarabacca, dry it, and rub it to powder, and blow some up the nostrils every day, to get a discharge from them: if you cannot get asarabacca, use cayenne pepper. After this disorder is abated, be careful of turning out, for fear of a second attack.

North-easterly winds are very dangerous, and often bring on this disorder, as it mostly happens in march and april, when dry winds blow from the north and east; but it is caused by cold sharp winds at other times, or a sudden change from heat to cold will bring it on. This disorder frequently happens to young Beasts, but they will take it at all ages.

THE CROOK.



This disorder much resembles the last, although there is much difference in them in some things, for the Crook seizes on the whole frame at once. Sometimes it draws the head to one side, and at others takes away the use of the limbs, or strikes them in the inner parts, which is vulgarly called the Heart-crook; indeed the disease begins there, and is caused by a stag-

nation of the blood, which also causes many other disorders to begin there. The heart is the cistern of the bloodvessels; and the blood being thrown too fast from the cavity of the heart into the arteries, and the arteries throwing it too fast into the veins, they become overloaded; then, when a coldness is brought on the whole frame by cold dry winds, this disease comes on, by which the whole body is disordered, one vessel forcing upon another till a stagnation is brought on.

The Crook in Cows begins in different places, and has different effects upon them: some are seized in the head and neck, which draws the neck to one side; they look wild in their eyes; shoot their tongues; slaver very much, and will thrust their heads into any corner, and stand there for some time: others are seized with agonies, or fits of madness at intervals, which are very troublesome: others are seized in their limbs, and brought off their feet. I have known a Beast lay 7 or 8 weeks in this disorder.

First bleed well, and if the neck be drawn aside, bleed on the round side, (the contrary side to that to which it is drawn;) then give the following.

- 4 oz. of Mithridate.
- 2 do. Grains of Paradise, in powder.
- 2 do. Flour of Mustard.
- 2 do. Turmeric.
- 1 Quart of Ale.
- $\frac{1}{2}$ a Pound of Treacle.

All to be given together, in order to bring heat into the small pores, and to give motion to the whole of the bloodvessels. Again, the Beast in the first stage

of this disorder will heave much in its body, give great belches, and slaver will pour from its mouth and nostrils. I have always found the last to be a favourable sign, but when its nose is dry it indicates a strong fever, and if the Beast be seized in the limbs, and taken off its feet the first twenty-four hours, you may expect a continuance. Should the disorder continue in the head and neck, repeat the bleeding, and be careful to bleed on the *round* side of the neck; and if the Beast be hard in its dung, which is often the case, give the following.

- 8 oz. of Glauber's Salts.
- 2 do. Cream of Tartar.
- $\frac{1}{2}$ do. Jalap powder.
- 1 do. Powdered Ginger.

Dissolve the above in 1 quart of boiling water; but if moderately kind in its dung, give the following.

- 4 oz. of Burdock Root.
- 4 do. Valerian do.
- 1 do. Gum Asafœtida.
- 1 do. do. Guaiacum.

The first two roots to be boiled in water 10 minutes, then strain it off, powder the gums, and give all together. You will observe that the Animal will often be dry; then pour a little lukewarm water into it, if it will not drink it, and give gruel with a little saffron in it.

In the second stage of this disorder the pulse is low and irregular, and the Animal weak; then I wish you to give some nourishing cordial, made of ale, saffron, and a little mithridate: (6 pennyworth of the first, and 2 ounces of each of the two last;) also, you may give the following, once a day, for two days.

1 oz.	of Aniseeds,	in powder.
1 do.	Long Pepper,	do.
1 do.	Turmeric,	do.
1 do.	Cummin Seeds,	do.
1 do.	Orrice Root,	do.
1 do.	Galengal,	do.

To be given all together in warm ale.

The third stage is about two days from the beginning, about which time the Beast will be in a recovering way: if it keep on its feet, stir it as little as you can, and let its cordials be comfortable, for it will want support. Should the neck be crooked, sweat it with a sheep's skin, laid with the flesh side to it, for two hours, and endeavour to straighten it as much as you can; but be careful to wrap a horse-cloth round the neck when you take off the skin, that the Beast get no cold. If it be off its feet, lay it as easy as you can, and if it cannot turn itself, turn it two or three times a day:—the first thing in the morning, and the last at night; and lay it where it has room enough.

When it gets strength, let it have room to stir, or turn itself. If the weather be favourable, lay it on a barn-floor, with the doors open to give it air; but if you have not that convenience, lay it as well as you can: also I advise you to give the following every two or three days, till the Beast gets up.

2 oz.	of Castile Soap.
1 do.	Nitre, in powder,
$\frac{1}{2}$ do.	Oil of Juniper.
4 do.	Juniper Berries.

Make the juniper berries into tea; that is, bruise

them, put them into a pot, and pour a quart of boiling water on them; let it stand for ten minutes; then clear it off; shred the castile soap thin, and give all together: this is to clear the gall-pipes by urine, for the greatest obstruction lays there. When the Beast is able to turn itself, lay on the following oils, and rub its cuplins, (where the back-bone joins the isins,) and the small part of the back. In 6 or 7 minutes after the oils are laid on, the Animal will endeavour to get up, and if it cannot perform it, give it some assistance. Should this fail the first time, repeat it in 3 or 4 days,

- 1 oz. of Oil of Amber.
- 1 do. do Origanum.
- 1 do. Spirit of Sal Ammoniae.
- 2 do. Oil of Turpentine.

Put all together into a bottle, and shake it well up: lay one half on at a time, and if the Beast has laid some time, rub its legs well, to bring warmth into them, and to give circulation to the small vessels. This mixture of oil has risen many a Beast that has laid for some time. Mr. John Green, of Drafton, had one that had laid for 14 weeks at Kettlewell, and it was got on its feet by once rubbing. Mr. Peter Parkinson, of Flastby, had one risen by the same; and if I were to enumerate, I could mention a great many.

AN ASTHMA.



This disorder is attended with a shortness of breath, and frequent hooseing, which causes a waste of flesh,

and brings on a weakness in the whole frame, but the Beast is worst at spring or fall, or when there are high, cold winds, for the weather has a great effect in this disorder. In summer-time, when the herbage is full of juice, and plentiful, the weather warm, and the water good, it will do pretty well, but quite otherwise when it has dry meat and cold air. I would advise those that have Cattle in this disorder to feed them; but they must do it in summer, as they cannot in winter, this disease being like the asthma in men, sometimes better and sometimes worse, as the lungs grow larger or smaller; that is, as they draw in more or less air: or change of air will cause an alteration.

The lungs, or lights are of a spongy nature, and so full of pipes that they can be blown up to a very large size; and as the blood is all refined through them, therefore when it is overheated, and in a bad state, it must of course inflict this disorder; indeed, any other disease happening to the Beast increases this, from the blood being refined through the part, which gathers from the blood a superfluous matter, and increases the disorder of the lungs, and what way can they free themselves from the load which they receive from the blood, but by throwing it up at the nose; therefore, if you observe a Beast that has this disorder, you will often find a tough, glueish discharge at its nostrils.

A Beast is not troubled with a fever in this disorder, as in some, except there be a flood of disorders one upon another, which is too often the case. As for a cure, I believe it has baffled all doctors hitherto, but relief

may be had; therefore I will lay down the things that I have found to be best for it. I have known the following to be of great service.

- 2 oz. of Aniseeds Balsam of Sulphur.
- 2 do. Spanish Juice.
- 2 do. Salt of Tartar.
- 6 Pennyworth of Saffron.

Cut the juice small, and dissolve it in 3 gills of hot water, put the saffron into the pan with the juice, and it will draw the strength out of it the better; when nearly cold, add the other drugs to the liquor, and give all together, milk-warm, fasting, and to fast 2 hours after; also let blood at the same time. Or, give the following.

- 1 oz. of Elecampane Powder.
- 2 do. Liquorice do,
- 1 do. Turmeric do.
- 2 do. Balsam Locatel.
- 2 do. Syrup of Garlic.

If you cannot get syrup of garlic, get 2 ounces of common garlic; shred it small, and put all together: to be given in horehound tea, fasting, and to fast two hours after: let blood at the same time. I have known tar-balls greatly relieve this disorder; to make which, do as follows. Mix 8 ounces of fresh tar, (Norway tar is the best,) and as much linseed-meal, or rye-meal as will bring it into a proper state for balls. This will do for four times, and you may give one fourth part every other morning, made into 2 or 3 balls, that it may go down the better. Tar-water is also of great service in this complaint; to make which, put a pint

of tar into a pitcher, pour a quart of water on it, and let it stand 2 or 3 days; then strain it off, and add 4 ounces of honey: this will do for 4 times, and give every other day, as above directed. These receipts will cure, if the disorder upon the lungs is only slight, but if of long standing, it will only relieve.

A HOOSE, OR INFLAMMATION BY COLD.



This is a common case in Horned Cattle, for Colds or Inflammations, either slight or violent, are often received; either of which causes a Hoose, or Cough; when the Animal looks heavy in the eyes, dry in the mouth, heaves in the flank, loses its flesh, and often gapes, belches, or coughs, loses its cud, grazes little, and its dung and water fly from it in small quantities: although this disorder is well known, yet it is not well understood. Some Beasts have Belches for some time, much like asthmas, therefore, I advise their owners to treat them the same as for an asthma, but for one that is brought on by cold, or bad meat, to give as follows.

- 1 oz. of Elecampane Powder.
- 2 do. Liquorice do.
- 2 do. Honey.
- 1 do. Balsam of Sulphur.

To be given in linseed tea, or barley water, and take a little blood from the Beast at the same time. I have often known mouldy hay, or bad straw bring on this disorder. If your hay be mouldy it should be sprinkled with water, to moisten it, before it be given; and

salt thrown among your hay would be of great service. Limed land is often very pernicious in summer-time, and in some places where people lime their summer pastures, few, or none of their Beasts are free from a Cough.

A Beast that has a Cold which has fallen on the lungs, is to be treated in a different manner, for this is mostly attended with a fever; the pulse is quick and strong, the Animal heaves much in the flank, hangs its head, and constantly keeps coughing. The first thing to be done is to let blood; and then give the following.

4 oz. of Iceland Liverwort.

4 do. Cream of Tartar.

2 do. Nitre.

2 do. Spanish Juice.

Cut the juice small, boil all together in 4 quarts of water for 5 or 6 minutes, then strain it through a course cloth, or hair sieve, while hot, and give one half to the Beast, and the other half, 6 hours after; also, let its food be cooling and opening, and give warm water.

If this should fail of a cure, cut 3 or 4 heads of garlic, pour 1 quart of water on them, boil them about 4 minutes, then strain the liquor off, and add

2 oz. of Oxy-mel of Squills.

1 do. Balsam of Tolu.

1 do. Gum Scammony, in powder.

1 do. Tincture of Saffron.

1 do. Syrup of Marshmallows.

This must be put all together, and given at twice, 6 hours distance; and give boiled linseed for food, with 1 ounce of nitre, for linseed is both food and medicine

for many disorders. If the Beast be no better, and the fever continue, let blood a second time, and give 2 drams of calomel in a little linseed tea: be careful to give warm water, and to keep from cold, when you give the calomel, or it will bring on a heavy disorder. If the disorder will not submit to the above, repeat the last medicine, omitting the calomel. The above medicines are for a middle-sized Beast; add or diminish according to age or strength.

A STAGNATION OF BLOOD IN A COW'S LEG.



This disorder, which is commonly called a Bite by some venomous animal, comes on very suddenly, and much surprises the owner, who left the Beast well, and in the course of a few hours it has got a swelled leg: (mostly a fore-leg:) it will swell up to the breast, and in a short time a glutinous matter will run from the top to the foot, and if you run your hand down the leg you will scrape a gill of this matter off; which appears to the eye dangerous, but is not so. It is a disease which is neither attended with much danger or hurt to the Beast, which is but little lamed by it, and has not much pain. It mostly happens to Cattle in full condition, or thriving fast. As soon as you find it out, let blood, for bleeding will put a check to it, and then give the following as soon as you can.

12 oz. of Glauber's Salt.

2 do. Cream of Tartar.

Dissolve them in hot water, and give it to the Beast;

and get the following for a wash to rub the leg with.

- 2 oz. of Extract of Lead.
- $\frac{1}{2}$ do. Sugar of Lead.
- $\frac{1}{2}$ do. Lapis Calaminaris.

Put these to a pint of water, wash the leg well with it, high enough to prevent the swelling going up. When you have given the drink, and let blood, and rubbed the leg with the mixture, the business is done, and you need not take any more trouble about it.

FOR CHAFF IN THE EYE.



- 1 dram of White Copperas.
- 1 do. Sugar of Lead.
- 1 do. Lapis Calaminaris.

All in fine powder, and dry them before the fire, as they will turn soft. When they are powdered and mixed, fill the barrel of a quill, put the small end in your mouth, and blow the powder sharply into the eye; and if the eye is not clear in 3 days repeat it; but not in less than 3 days, for fear of bringing on an inflammation.

FOR A LASH BITE, OR STROKE ON THE EYE.



If the eye is red and inflamed take the following.

- $\frac{1}{2}$ oz. of Extract of Lead.
- $\frac{1}{2}$ do. White Copperas.
- $\frac{1}{2}$ do. Lapis Calaminaris.
- 20 drops of Tincture of Opium.
- 1 pint of White Rose-water.

Powder the copperas and lapis fine, put all into a

bottle, and wash the eye well with it every day, taking care to shake the bottle well up. This Eye-water is good for either Cow, Horse, or Man.

If the eye continues inflamed, lay conserve of red roses on it, and let it stay on for 24 hours, and when you take it off, be careful of cold; then rub with your bottle, and there will be little danger of not doing well.

THE YELLOWS, OR JAUNDICE.



This disorder often happens to Cattle, and arises from too great a quantity of bile, which forces itself into the blood, and the liver causes the blood to press too much upon the gall-bladder. I need not enumerate the stages of this disorder, but point out how they are known, and how to cure them. It is well known that the Jaundice is an overflowing of the gall-bladder, and the yellowness of the eyes and nostrils will point out the disorder. There is also a constant itching all over the body, and if the Beast has any white hair it will turn yellow; if it gives milk, that will also be yellow, and its urine will be yellow, and sometimes almost the colour of blood. Its dung will be hard and tough, almost like burnt clay. Cattle in this disorder are not fond of stirring much, it being of a very sluggish nature. These are the general signs by which this disorder may be known.

In the first stage let blood, and if the pulse be strong bleed again in 12 hours, and as soon as you have let blood give the following. A small handful of Barberry

bark, if you can get it; boil it in 2 quarts of water for 15 minutes, and when cold clear it off, and add,

2 oz. of Castile Soap.

2 do. Cream of Tartar.

$\frac{1}{2}$ do. Saffron.

2 do. Turmeric Powder.

Cut the castile soap small, and put all together. If you cannot get barberry bark, get a handful of celandine. Repeat the above every 12 hours for 2 days, which will be 4 times, for the Jaundice is a disease that will not submit to trifles; and if it is not removed, there is danger of the Black Jaundice taking place. If the Beast is no better in 3 days, give the following.

2 oz. of Oxy-mel of Squills.

4 do. Epsom Salt.

$\frac{1}{2}$ do. Oil of Juniper.

2 do. Venice Soap.

To be given in barberry bark tea, or celandine tea. Also give gruel made of iceland liverwort and linseed, boiled together in 4 quarts of water for 10 or 12 minutes, (2 ounces of the former, and 4 of the latter,) and strain it through a course cloth while it is hot, or you will not be able to get it through; then mix it up with a little bran and oatmeal. Give it twice a day, and it will be both food and medicine, and if the Beast continue, repeat the above medicines the second day. Some people give wood-lice in this disorder, but I cannot perceive how they can thin or clear the gall of its glutinous matter.

If the Animal is not getting better in 6 days, there is great danger of the Black Jaundice. If that takes

place, the liver becomes hot and dry, the gall becomes dry also, the Beast uneasy, and the pulse low, quivering, and irregular; also the skin grows stiff and dry, the Beast hangs its head and refuses its meat, and the yellowness turns blackish:—in this case there is great danger. Give the following.

2 oz. of Spirits of Sweet Nitre.

4 do. Syrup of Marshmallows.

2 do. Venice Turpentine.

4 do. do. Soap.

Cut the soap small, and mix all together in juniper-berry tea, give one half, and the other 6 hours after. To make the juniper-berry tea, bruise the berries, put them into a jar, and pour 2 quarts of water on 8 ounces of berries; let them stand till nearly cold, and then strain them through a cloth. Repeat it the day following.

I wish you also to get a good handful of wild carrot, and parsley roots, and boil them in juniper-berry tea, adding 2 ounces of vinegar of squills: give plenty of this, as there is no danger in it. Also throw up a glyster made of juniper tea and a little sweet oil, which repeat every 5 or 6 hours, and when you have given it, hold it in with a cloth.

In former books little has been said of the spleen, or milt, but in my opinion it is a good deal affected in this disorder, and also in the Redwater; for, being so near the liver, it must of course be overcharged with the superfluous chyle that it receives from the liver and gall-bladder. Some time ago the spleen was thought

to be of no use to the creature; nay, I have heard it affirmed for a truth that it has been cut out of both horses and dogs, and that they have lived without it; but whether this assertion is to be credited or not, I cannot say, but am of opinion that the great Creator of all things made nothing in vain, much less the spleen, for this bowel is like a sponge, and when the liver, or gall-bladder is overcharged, it receives what comes from them: but you will say, perhaps, how does the spleen discharge it, seeing it has neither artery nor vein to carry it off? I answer, there are small pipes, but little passes by them, most of the superfluous matter being discharged by heat; for when a Beast is afflicted by the Jaundice, or the Red-water, the spleen is much larger than at other times, and of a greater heat, and sends forth greater fumes. Dizziness, belches of wind, dimness of sight, and even melancholy are brought on by the fumes which rise from the spleen, when overheated. It forces its fumes into the arteries, and they are carried by the veins to all parts of the body, so that a Beast when in the Jaundice turns yellow all over the body: much more might have been said about the spleen, but let this suffice at present.

THE RED-WATER, AND THE BLOODY URINE.



These must be treated differently, for they are different disorders, so I shall begin with the Red-water. This complaint is very common, but not well understood, and may be known at the beginning by the dung;

for as the gall has a pipe into the small intestines, as well as into the pipes that lead through the kidneys to the bladder; therefore, when the gall is discharged into the small intestines, it causes the Animal's dung to be thin; also, it is forced from it in small quantities about the thickness of one's finger.

At the beginning the Beast holds its water long, so that the disease may not be discovered by those that look at it, but in a few days it stales oftener, and its water is of a dark, bloody colour; its dung grows stiffer, and its water comes in smaller quantities, as the fever increases; its water will also froth where it makes it, from the heat of its body. The Beast is fearful of making water, as the heat thereof is so great that it often brings the skin off the neck of the bladder: this causes it to make a little at a time, and often.

About the second or third day the pulse is strong, the fever increases, the dung grows stiffer, and the Beast looks heavy in the eyes, and begins to refuse its meat. It sometimes happens that a rupture is made in a strong vessel, which takes the Beast off in a very short time.

This disorder is most common in summer, when Cattle are out at grass, and some say that change of pastures is the cause of it, but I am certain those will take it that have never been changed at all. Cattle that come out of pastures clear of wood, to others that lay high, and have plenty of wood to brog upon, are almost sure to have it: and those that come from low fens, or marshy land, to high limestone land, are very apt to take it: but I am certain that the weather has

great influence over it; for I have known long dry seasons, when there has been very few in it, except at the beginning; but, when the weather has broke, and become cold and wet, suddenly there has been many in it. Sudden heat or cold also causes Cattle to be afflicted by the Red-water.

High winds, if cold, dry up the pores, and cause the blood to flow more violently in the large vessels, which brings on this disorder. Bad water also forwards it, for when afterwards they come to good, they take too freely of it, which overloads the bowels, and forces them hard against the midriff, bringing too much weight on the vessels, which causes them to break.

Iron-forged water is bad for Cattle, but not so dangerous as low standing water: also water that comes from smalt-mills is dangerous, for when they are near a smalt-mill they are always in danger both of the Red-water and of the Belland, or blown in the lungs. Also, Cattle that are drove much in hot weather are likely to have the Red-water.

Many more things might be pointed out, but we will turn to the disease, and endeavour to remove it, when it has taken place. If you find the disorder out soon, in the first place, bleed pretty freely; but if the Beast has had it some time, it would cause death.

Some say that bleeding is not proper at all, as the Beast is losing blood enough already. So it is: but that is no reason why it should not be bled; for, if a man is much subject to bleeding at the nose, bleeding in the arm is the best remedy; for, if the bloodvessels

were not overloaded there would be no bleeding at all. Many proofs might be brought forward that bleeding *in the first stage of this disorder* is almost certain to effect a speedy cure, but if not done in *the first day or two* it must be omitted.

When you find a Beast at the beginning of the disease, after bleeding, give 1 pint, or 3 gills of pale oil. I wish all who have Cattle in this disorder not to give every medicine that falls in their way, for it is so common that every one has a medicine for it, and if it is not just at hand, they will fetch it from some of their neighbours. In my opinion, many Beasts in this disorder are killed by improper medicines.

A person once came to me about a Cow that had been 4 days in the Redwater: I asked him what he had given her: he said "*Many things; and before I came off we gave her a pound of charcoal and a pound of coal-dust, in water.*" I told him they had given her enough, and that I could be of no service to him.—Pray would any man of reason think that such a medicine could pass the manyfold, when, probably, the heat of the fever had dried her up already? Many medicines, offensive to nature, are given, to dry up the pores of the skin: a poor way of proceeding indeed! What is given in this complaint should be of a cooling, opening nature, such as will thin the gall, and clear the gall-pipes.

It is well known that this disorder takes its rise from the liver, which makes the blood, and forces it into the cavity of the heart, and it is thrown back again to the arteries and causes an eruption. The gall-bladder

becomes much larger than it ought to be, by sucking in the juices of the liver, and by the blood forcing itself into the gall-pipes, which carry the blood and urine to the bladder, from whence it is discharged in the common way. Pray how could the blood and water be mixed together if that was not the case? Also, the spleen is now as fully engaged as in the Jaundice, in sucking up the superfluous discharge from the liver and gall-bladder; and this is the reason that the fever is so strong; for the spleen throwing up its fumes, causes the heart to beat very much, so that if you lay your hand on the ribs on the left side you cannot but feel it. (The heart lays on the left side, close shut up by a skin-like bladder, with a little water in it, and should this water be dried up, it would soon cause death to either man or beast.)

In the first stage of the Redwater, (which is known by its dark colour,) bleed well, and give 1 pint, or 3 gills of pale rape oil, as mentioned before; and during the disorder stir the animal as little as you can. If no better the second day, give 10 or 12 ounces of Glauber's salt; and if no better the third day, give the following.

2 oz. of good Castile, or Venice Soap.
 $\frac{1}{2}$ do. Balsam Capivi.
 4 do. Cream of Tartar.

Cut the soap small, and put all together into linseed tea, and give it to the Beast milkwarm: also, give 8, 10, or 12 ounces of glauber's salts, (according to the strength of the Beast,) 6 hours after. If the disorder be not then abated, give the following.

- 4 oz. of Gum Arabic, (Turkey,) in powder.
 2 do. Venice Soap, (cut small.)
 $\frac{1}{2}$ do. Balsam Capivi.

Give these together in linseed tea, or iceland liverwort tea, and give the Beast cold water if it will drink it; but if not, put a hornful or two into it: also, try it to lick fresh mould. (The sweetest mould is to be got in a hedge-bottom, under a hazel bush.) If it will lick it, let it have as much as it likes, for such as take fresh mould seldom die.

On the fifth day a glyster, (thrown up every 4 or 5 hours,) would be very proper. Make it of rye or linseed meal, and a little butter; not too thick, or it will not pass through the glyster-pipe. After giving a glyster, hold a cloth to the fundament for a short time, to keep it in. Give gruel made of rye or linseed meal, with half a pound of small currants in it, which will be both food and medicine, but do not overload its stomach by giving too much.

I have mentioned the best medicines that I know of, for, if I were to enumerate all the medicines that have been got at my shop since I have been in practice, I should fill a large volume; but glauber's salt, gum arabic, venice soap, balsam capivi, and cream of tartar are the best; and, if the disorder requires it, repeat any of the above. Many will affirm that the last medicine is the best, when it is no such thing; for the first may do good in checking the disorder when the last does none at all.

A continuance of this disorder brings on a Diabetes,

or oppression of urine. When this is the case, give 2 ounces of spirits of sweet nitre in a little cold water, every 3 or 4 hours. Sometimes a violent looseness, or scouring comes on, occasioned by the superfluous matter which is thrown into the small intestines. This is a good sign of recovery, if it is not continued too long, for nature finds out ways to relieve herself, and many disorders both in man and beast are carried off by a looseness. But you will say, perhaps, that a violent looseness is weakening; and, the Beast being weak to begin with, if it is not stopped will soon take the Beast off. So it will if not stopped; but to check it give the following.

1 oz. of Tormentil Root, in powder.

$\frac{1}{2}$ do. Turkey Rhubarb, do.

1 pint of Red Wine.

Give all together, at twice, 6 hours distance. If the complaint continues, give the following.

2 oz. of Tormentil Root, in powder.

1 do. Japan Earth, in fine do.

$\frac{1}{2}$ do. Dragon's Blood, do.

To be given in a pint of red wine, and if the Beast is not better, repeat it in 6 hours. A Beast that has been much afflicted by the Redwater, and recovers, is often left very weak, with lowness of spirits, a bad stomach, dryness of the skin, a running at the eyes, its belly tucked up, its hide fast, (what is called hide-bound,) and, if it is a milch Cow, with a loss of milk. In this case give the following.

2 oz. of Aniseeds, in powder.

2 do. Turmeric, do.

4 oz. of Miderale.

2 do. Grains of Paradise, in powder.

$\frac{1}{2}$ do. Saffron.

Give all together in 3 pints of good old ale, and if it does not work a cure, repeat it in a week. Having gone through most of the heads of this disorder, I must leave it to better judges; although few can be found who have had more practice in it, and that for 57 years; but the God that made us does not shew all to man at once; there is a growth in knowledge as well as in grace. I have mentioned only a few receipts, compared with what I might have done, but they are the best that I know of; and the fewer the better if they answer the purpose.

THE BLOODY URINE. This disorder seldom happens to Bulls or Oxen, or young Beasts that have not had a calf, but chiefly to Cows. In this complaint blood comes with the urine in the same manner as in the Redwater, but of a lighter colour; and sometimes in cakes, as light-coloured as blood drawn from the neck. Sometimes the bleeding will nearly stop for 2 or 3 days, or longer; and then begin again as before.

I have known Cows continue in this disorder for 10 or 12 weeks, and then get better of themselves: it kills very few, and those linger away by degrees, without pain. It is attended with no fever, no heat of the body, no danger of morbound, no forcing of urine, nor loss of appetite, unless it continues a long time.

This disorder generally happens in winter, when at dry meat, and has been above a match for abler men

than myself, and is likely to be so for many more. Disorders never happen without a cause, but there has never been a just cause found out for this, that I have read of; and abler men than I am have been at a loss to find it out; but, as the blood comes with the urine, they supposed it must have the same cause, and be the same disorder as the Redwater: but it is not; although many have treated it so till they found out their mistake.

The seat of this disorder is in the kidneys, and it is caused by the breaking of a small vessel there. But how comes this break, as it mostly happens in winter, when the weather is cold, and the Beast at dry meat?

It may come by bad water, mouldy hay, or any bad meat that presses too hard upon the lungs, and causes a sudden hoose, or cough. I have seen Beasts suddenly seized with a cough, which forced their dung and water to a distance from them; and it is likely enough, in my opinion, for the kidneys then to receive a shock sufficient to break a small vessel. Sometimes the stand is too short for the Beast, which causes part of the kidneys to hang over the group-edge, and this may be a sufficient cause for the breaking of a small vessel; for, the kidneys being tender, much pressure on them may soon do it. Besides, there may be other causes, such as sudden frights by rats, &c. Nothing is more likely to cause misfortunes than being frightened.

This is not to be called a common disorder, but it sometimes happens. The following is often of service.

3 gills of Black Beer.

2 oz. of Irish Slate.

Give the above, and if it does not cure, try the next.

1 oz. of Japan Earth, in fine powder.

1 do. Venice Turpentine.

1 do. Gum Arabic, (Turkey,) in powder.

1 do. Gum Juniper, do.

To be given in tea made of traveller's joy, (or Robin Hood's feather:) it grows among ling, and runs to a great length: boys often get it to tie round their hats. If you can get it, boil a large handful of it well in water; clear it off, mix all well together, and give it fasting, and to fast 2 or 3 hours after. Repeat it once a day for 2 days; and if it should fail, try the following.

2 oz. of Tormentil Root. in powder.

2 do. Bole Armenian, do.

$\frac{1}{2}$ do. Camphor, do.

2 do. Cumprale Root, do.

2 do. Irish Slate, do.

Give it in tea, as above, if the herb can be come at readily; if not, in oak bark tea; and if these should not cure, you must repeat them, or wait till nature produces a change, for I can inform you of no better. As I said before, it has been above a match for many.

THE MILK FEVER IN COWS AFTER CALVING.



This disorder chiefly happens the day after calving. The pulse is low and irregular, the eyes are dull and heavy, the Cow starts, flutters and staggers till she

comes down, and the milk can only be got from her in small quantities at once. This disorder mostly happens when the Cow is full in flesh, and may occur at any time of the year, but is not so dangerous at hard meat as at grass; one reason for which is that the weather is not so hot. It might be often prevented by bleeding and milking before calving. It never happens to a Cow with her first Calf, and seldom with the second, but chiefly to great milkers, for few others have it.

People that have a Cow which has had this Fever, should not let her take the Bull again, but feed her, for if she calve and have the disorder again, there is little hope of her mending.

The first thing to be done is to let blood pretty freely, and to lay her as easy as you can. She will soon have a strong pulse, and a high fever, therefore be careful to prevent her being too hot, if in summer, or too cold, if in winter. Cooling and opening medicines are best for her; such as nitre, spirits of sweet nitre, cream of tartar, &c. Give the following.

- 2 oz. of Spirits of Sweet Nitre.
- 2 do. Syrup of Marshmallows.
- 3 do. Cream of Tartar.
- 2 do. Salt of Tartar.

Give the above in linseed-tea or barley-water. Pour a hornful or two of cold water into her every 2 hours, and let her lay mostly on the milking side, upon plenty of straw, and where there is room to stir; and draw the paps often, to get what milk you can from them. This disorder lasts 2 or 3 days: if the Cow can bear under it for 2 days there is great hope of her getting

better; for in this as well as the Redwater, people will persuade the owner to give first one thing and then another, when they neither know the disorder nor the medicine; and I have even known some advise him to get the Cow on her feet and to sling her, when she has not been able to hold her head up:—this was a ready way to kill her. Never offer to get a Cow up till she is able to stand, and some are brought so low by this disease as not to be able to get on their feet in less than 3 weeks. You may turn her over every 3 or 4 hours after the first day; and if you give cooling, opening medicines there will be no fear of her being bound, for that is seldom the case in this disorder.

Many are for giving glysters, and I have known them given in this complaint till the Animal has been blown as full of wind as she could hold, which was the direct way to kill her, for the glysters and air must fill the bowels; and yet some of these people call themselves Cow-doctors! It is difficult enough to prevent her swelling, without giving her so many glysters as to cause her to swell. Six hours after you have given the other, give as follows.

- 4 oz. of Epsom Salt.
- 1 do. Nitre.
- 2 do. Spirits of Sweet Nitre.
- 2 do. Syrup of Squills.
- 1 do. Spirits of Sweet Vitriol.

This may be given as the last, or in juniper-berry tea. Also, get a pound of juniper-berries, bruise them, and put them into a jar, and pour 4 quarts of boiling water on them; let it stand till cold, then strain it off,

and give a hornful every 2 hours, instead of the cold water mentioned before. Juniper-berries are loosening, and for wind you cannot give a better medicine. In 35 hours the Fever begins to abate, and there is hope of amendment, but sometimes other disorders are brought on, or the Fever returns, and if neither of these should happen the Animal is often left in a feeble state.

As I said before, do not try to get the Cow up till she is able to stand. If she cannot turn herself, turn her 3 or 4 times a day. When the Fever is abated she will want nourishment: give her good gruel, made of ale, a little water, and meal. The following drink will be very useful.

- 2 oz. of Aniseeds, in powder.
- 2 do. Grains of Paradise, in powder.
- 2 do. Turmeric, do.
- 2 do. Caraway Seeds, do.
- 2 do. Beast Spice, do.
- 2 do. Mithridate.
- $\frac{1}{4}$ do. Oil of Aniseeds.

Put all together in 2 quarts of warm ale: give one half, and the other half, 6 hours after. This is a great support, and will help to renew the blood. If the Cow does not get up in 7 or 8 days, rub the following on her loins, especially where the back bone joins the hind-quarter.

- $\frac{1}{2}$ oz. of Oil of Origanum.
- 1 do. Oil of Spike.
- 1 do. Oil of Amber.
- 1 do. Spirits of Sal Ammoniac.

Put all in a phial together, and shake it well up; then rub one half on, and the other 24 hours after. In 6 minutes after you have rubbed the first half on she will try to get up, and then give her a little assistance. I have laid down the best method of treatment, and the most proper medicines I know of, but if any thing fresh should occur I must leave it to your own discretion. It is a heavy disorder and kills many.

A SPRAIN, OR CLAP, IN A BULL.



It is easy to tell when a Bull has this disorder: he is restless, and not willing to stir much, is often laid, his eyes are red, he lowers his head, loses his cud, and refuses to eat. You may see his yard swelled, and often out of the sheath; his testicles will also be swelled, and he is not fit to couple with a Cow. This disorder is sometimes difficult to remove, especially when in an advanced state. Some will let it alone, supposing the Animal will get better of itself, till it turns to a venereal disorder.

The first thing to be done is to throw the Beast, and wash his yard, sheath and cods with the following mixture: if his yard is out of the sheath it is easy to come at, and if not rub the mixture well up his sheath.

1 oz. of White Copperas, in powder.

1 do. Sugar of Lead, do.

1 do. Extract of Goulard.

1 pint of Soft Water.

Wash well with this mixture every other day, and as soon as you have washed once give the following.

- 12 oz. of Glauber's Salt.
- 2 do. Cream of Tartar.
- $\frac{1}{2}$ do. Jalap, in powder.
- 2 do. Nitre.

Give all together in water: put the water to it boiling hot, and give it blood-warm. Miss one day, and then give the following.

- 2 drams of prepared Calomel.
- 2 do. Gumboge, in powder.
- 1 do. Turbith Mineral.
- 1 oz. of Nitre, in powder.
- 2 do. Flour of Sulphur,
- 2 do. Liquorice Powder.

Give these all together in linseed tea, and be careful that the Beast gets no cold water for 24 hours, and if the disorder happens in winter, you must give warm water all the time it is taking the medicines. If you find the last medicine is removing the disorder, repeat it in 5 or 6 days. One pound of glauher's salt may be given the day after you give the last medicine, which will both carry the mercury off and relieve the disorder; or, if the Beast be strong, you may give him 20 ounces of glauher's salt. If the disease is still obstinate, give the following.

- 2 drams of Prepared Calomel.
- 2 do. Turbith Mineral.
- 1 Scruple of Corrosive Sublimate, in fine powder.
- 1 oz. of Jalap, in powder.
- 2 do. Cream of Tartar.
- $\frac{1}{2}$ do. Bitter Apple.

Boil the bitter apple in 2 quarts of water, and continue boiling it till nearly half is consumed, then clear

it off through a sieve or coarse cloth, and give the above with the liquor, and be careful to keep from cold. When both the heat and swelling are abated there will remain a weakness, and perhaps a running at the end of the pizzle. In this case give as follows.

- 1 oz. of Balsam Capivi.
- 2 do. Spirits of Sweet Nitre.
- 1 do. Oil of Turpentine.
- 1 do. Gum Copal, or Gum Arabic, in powder.

The gum to be put in warm water, and stirred about till it dissolves; then put in the balsam, stir it up well, and add the spirits, all for one dose. This may be repeated as often as is necessary, for it will cure the disorder in any Beast, as I never had an instance of its failure in my practice. Two or three days is sufficient time between any of the medicines, but it may be longer if the disease is not violent. You may repeat the glauber's salt as often as you find it necessary. I once gave 20 ounces of it at a time, 3 days together; but proportion the quantity to the strength of the Beast, for all my receipts are for a middle-sized Beast.

A CLAP, IN A COW.



This disorder is of the same nature as the last, but requires different treatment. Some people are of opinion that the Bull or the Cow cannot have it alone, but that one must receive it from the other. I will not say that this is never the case, but it is oftener brought on by sprains or heat than by infection, for the Bull

often has it when the Cow ails nothing, and the Cow, when the Bull is free from it.

But let us return to the disorder of the Cow. At the beginning she will hold up her tail, thrust up her back, often look backwards, and in summer-time will lay much among rough grass. If you open her barren you will find a little tough matter, and many little blisters: the outside of her barren will also be swelled. By these signs you may discover when a Cow has this disease. In a few days the heat will abate, but then it is growing worse to cure. I have known some Cows have a running up to the calf-bed, till part of it has been eaten away; and others that have had cancers in their barren from it, but this is caused by neglect, or wrong treatment, and there is no cure for it. The following is a quick and certain cure at the beginning. A Cow is much easier to cure than a Bull.

10 oz. of Glauber's Salt.
 $\frac{1}{2}$ do Jalap, in powder.
 1 do. Nitre, do.
 2 do. Cream of Tartar.
 2 drams of Prepared Calomel.

Dissolve all together in hot water, and give it nearly cold. (If in winter, give warm water for 2 days.) Then make a wash of the following, and begin to use it as soon as you have given the above.

2 oz. of Extract of Lead.
 1 do White Copperas, in powder.
 $\frac{1}{2}$ do. Sugar of Lead, do.
 1 do. Lapis Calaminaris.

Put all these together in 1 pint, or 5 jacks of water,

let them stand a short time, shake them up well, and then wash the inside of the passage as far as the bladder's neck, which will be about the length of a finger. Wrap a piece of cloth, or tow on a small stick to wash the inside, and wash the outside at the same time, shaking the bottle up frequently: wash twice a day till well, and if there is need, repeat the medicine in 4 days; but the first mostly cures, if given in time, this being a sure and certain remedy.

THE DROPSY, OR WATER TYMPANY.

This disorder is little understood by many, although too well known by some. It seldom happens to the male kind, but is most frequent among Cows in low, wet land; yet in dry land some have it. Some suppose that drinking too much water causes this complaint; but it is merely conjecture, they have no certain grounds for the opinion.

It is a stoppage in the gall-pipes, which lead from the gall to the bladder, and enter the neck of the bladder, from whence there is a passage between two skins to the bottom, before it enters the bladder. When the pipes are too much forced, or stopped by glueish matter, the urine cannot find a free passage, but oozes out, and in time fills the Beast's body; but it is a long while in doing this, especially the first time.

At the beginning of this disorder there is nothing to be seen for some time; at length you will perceive the Beast to grow fuller every week for some weeks; and

it will neither stand nor lay long at a time, for the water will be a burden to it when standing, and very uneasy when laid, as it presses hard against the midriff, and bears upon the chest till the Animal can scarcely get its wind. When the Beast can hardly get up or down, or in or out of a door, it is time to cut it.

I formerly cut them on the fore-side of the udder, but of late years I have done it near the back. When you cut the Beast, take her into a field, cast her, and dig up two or three sods, for her belly to fall in, also make a small passage out of the place for the water to run away. Cut her where you cut a Beast for being swelled with clover, and be careful to keep off the loin. Make a hole large enough to admit a strong finger. You need not be much afraid of cutting, as there is little danger in it, for the water lies just within the inner rind, all on the outside of the bowels. I have got 30, and 32 gallons from Beasts at a time. When you have got out as much water as you can, get the Beast on its feet, and put any plaister on the hole that will stick fast, to keep it from letting air in, and as soon as you can, for it is not like cutting for clover, as then you cut into the great belly, or first stomach, and the wind that goes in can pass through the bowels to the fundament; but the wind that goes in, when cut to let out the water, has no passage, but must return the way it went in.

When you have got the water away the Beast will be very sickly for 2 or 3 days, and some do not recover. When you get it to eat again, be careful not to

let it have too much water, and feed it as fast as you can that it may get fat before it fills again. I have known some be 12 or 14 weeks in filling, but if you can get the Beast to be decent beef, never put off to a second operation.

I do not know any medicine that will do good. Some give drinks, but they are of no use except to profit the seller.

INFLAMMATION OF THE KIDNEYS.



Beasts are often subject to this disorder, and it is too often overlooked by their owners. Sometimes on its approach it is taken for quite a different disorder. The general symptoms are as follows.—The Beast is seized with a trembling all over its body, and has a low, uneven pulse; it will hold up its back, thrust out its tail, and often make water in small quantities; its external parts are sometimes cold, and sometimes very hot; it often moves its hind-legs, and its urine is often high-coloured, and sometimes has a little blood in it:—if its urine is bright and clear, or a whitish colour, mixed with a few streaks of blood, the disease is dangerous; but, if the urine is of a brown colour, it is not so dangerous. The Animal's whole frame will be put in motion by sudden startings, caused by pain; and being restless and uneasy, it refuses its meat, and would often be drinking, though in very small quantities.

Whatever obstructs the blood, in its passage from the arteries to the kidneys, will produce this disorder.

Wounds, bruises, abscesses, swellings, hard exercise, sudden heat or cold, or bad water are very likely to bring it on. When the gall-pipes are stopped by glueish matter, which goes through the kidneys, a stone will be formed, which will cause great pain, and often brings on an inflammation. When the urine is of a dark colour, and pains the Beast to part with it, with cold sweats, and a quivering pulse, there is great danger of a mortification.

At the beginning of this disorder bleed well, and then give the following.

- 1 oz. of Nitre.
- 2 do. Syrup of Marshmallows.
- 1 do. Vinegar of Squills.

To be given in tea, made of parsley roots.—This is a safe and certain remedy at the beginning. If the first dose has not the proper effect repeat it in 24 hours.

If the disorder keeps increasing, give the following.

- 1 oz. of Balsam Capivi.
- 1 do. Venice Turpentine.
- 2 do. do. Soap.
- $\frac{1}{2}$ do. Oil of Juniper.

Take 8 ounces of Juniper-berries, put them into a pot, and pour 2 quarts of hot water upon them; cover them close till nearly cold, clear them through a cloth, and then mix the other articles with the tea. Be careful to cut the soap small, and stir all up well together. Give the Beast one half, and the other half 6 hours after. When you give the medicine, give plenty of warm water to work it off. (If the Beast will not take the water, give it with the horn.)

If its dung is hard, and of a black-brown colour, with a gloss on the outside, give 10 ounces of glauher's salt, dissolved in hot water. The urine often changes its colour in this disease, but when it is of a brownish cast, (nearly the colour of coffee,) it is most favourable. The medicines here laid down are those most likely to relieve the disorder, but, if they should fail, give the following.

2 oz. of Spirits of Sweet Nitre.

$\frac{1}{2}$ do. Balsam of Peru.

$\frac{1}{2}$ do. do. Tolu.

2 do. Vinegar of Squills.

$\frac{1}{2}$ do. Oil of Juniper.

Get a handful of wild carrots, if you can, and make it into tea, the same way as the juniper tea, and put all together; then give one half, and the other in 8 or 10 hours. Linseed, with a little nitre in it, will be both food and medicine.—Take one pound of linseed, boil it in 4 quarts of water for 10 or 12 minutes, then mix it up with a little bran into a mash, and dissolve 1 ounce of nitre in it while hot.

Be careful to lay the Beast as easy as you can, and not to stir it, for it cannot bear much stirring. Keep it neither too hot nor too cold: if it is winter keep its loins covered with a cloth. The above is the best way of proceeding that I know of, and the medicines are the best and safest.

INFLAMMATION OF THE LIVER.

This disorder is not so common as some, and it seldom happens to lean Beasts. It is chiefly brought on

by driving in hot weather. When a Beast has this disorder its eyes look red, and water much, and its tongue has a thick white scurf upon it; its pulse is quick and strong, its body fuller than it should be for what it eats, and slaver runs down from its mouth; it also groans and is short of wind from the liver being swelled and pressing hard against the midriff, and thus straitening the chest. The liver is seated near the heart and midriff, and the heart receives the blood from it by the vena cava, and throws it back again by the vena porta.

The first step to be taken is to bleed pretty freely, and then to give the same medicines as in the Jaundice, for this disorder so much resembles the Jaundice that it may justly be called a branch of it.

If the fever brings on a costiveness, or hardness of the dung, give glauher's salt to keep the body open, and let the Animal's food be of a cooling, opening nature. Rye-meal and bran will do for mashes; but in summer-time herbage in the field will answer better than dry meat in the house, for herbage in spring will carry off many disorders; but as it mostly happens to fat beasts, in my opinion it is best to kill them.

LOOSENESS, OR ROTTENNESS.



This disorder is much better known than the method of curing it, and is called Rottenness when it is not so. A slipperiness of the small intestines is brought on by an overflowing of the gall-bladder, for, as I said before,

the gall-bladder empties itself into the small bowels, as well as into the gall-pipes. When a Looseness is brought on by this means, it may be remedied by proper medicines. Sometimes the Looseness will nearly subside, and then a little cold air, or white frost will bring it on again with more violence. In order to distinguish this disorder from a real Rottenness, observe that the eyes will water much, and sink into the head, the Beast will lose its flesh, and sometimes a slimy matter, like skins will come with its dung: at times the dung will fly from the Beast like water, and at others it is stiffer: sometimes the Beast eats well, and at others refuses its meat. In real Rottenness the eyes are dry, and look as well as at any other time, the skin is dry and stiff upon the back, so that you can scarcely get hold of it with your hand; but on the flank it is thin and loose, and if you take hold of it you shake the whole. The Animal will eat as much, or more than when in health for some time, yet lose its flesh daily; its dung will be thin, black and greasy, and blobs will stand on it.

If a Cow is tainted with this disorder before she calves, she will be much worse after calving; and white frosts in the latter end of summer will increase the complaint. I have known Cattle bag under the jaws both in the Overflowing of the gall, and in Rottenness; but the former disorder is the beginning of the latter. The overflowing of the gall causes a slipperiness of the small intestines, and about ten yards of the bowels become like a Calf's trundle parboiled, if you

will allow me the expression; this part is also thicker and straiter than usual; and the gall being seated on the liver, disorders both liver and lungs. **The first thing to remedy this disorder is to keep the Animal warm.** Young Beasts may be soon cured, but old ones are bad to cure. Keep the Beast from white frozen grass, potatoes and turnips. I have known bleeding, and powder of oak bark useful in stopping a flux of the gall; but try the following, for it has stopped it in many.

4 oz. of dried Box Leaves, in powder.

4 do. Bole Armenian.

2 do. Aniseeds, in powder.

2 do. Ginger, do.

Take a good handful of sloe-thorn leaves, (if in summer,) boil them in 2 quarts of water for 10 minutes, clear it off when cold, and give all together, fasting, and to fast 2 hours after. In winter use oak bark instead of sloe-thorn leaves, and repeat this medicine every other day, for 3 times at least, if the complaint is not cured. Give hay, and warm water at the time the medicine is taken. A pound of butter, melted in warm water, and given to the Beast, sometimes appears to do good, but whether the disorder is mending before the butter is given I cannot say, for I do not understand how it can do good. Isinglass, (4 ounces at a time,) is likely to be serviceable, for it is of a healing nature, and a good astringent; but should the above fail of a cure, recourse must be had to stronger and more drying medicines, to dry up the superfluous juices of the gall. Take—

- 1 oz. of Elixir of Vitriol.
- 2 do. Crabs Claws, in powder.
- 2 do. prepared Hartshorn.
- 2 do. do. Chalk.
- 2 do. Tormentil Root, in Powder.

These to be given in oak bark tea, and to be repeated as often as needful. The following is often of great service.

- 8 oz. of Oak Bark, in fine powder.
- 1 pint of Common Brandy.

Add a little water, and give it to the Beast. If these medicines fail, it is doubtful whether any thing will answer the purpose. When there is a bag under the chaps, or jaws, thrust a hot iron through it, and put a small cord through the hole; tie the cord to keep it in; rub it with a little grease of any sort to make it pliable; stir it every day till the matter is discharged, and then pull it out.

TO HELP A COW IN CALVING.



There is often great mischief done, from want of understanding how to help a Cow in calving. I here give you the best advice that I can, and I have had very much practice in the business. In the first place, do not be too hasty in your proceedings, for sometimes a Cow will have pains on her, and part with a little water, or loosening, and the pain will go off again, and sometimes the neck of the calf-bed, or what is called the yambs will fall down, and give pain to the Cow.

I have been fetched a great distance to Cows many a time when they were not near calving, and did not calve till some days after; yet, before I went, some had tried much to get their hands into the calf-bed, and could not force a passage; and sometimes people have been so foolish as to endeavour to cut a way to the calf, and those people were butchers too, and ought to have been wiser:—only give time, and the calf-bed will open of its own accord. There are 2 water-bladders, and sometimes 3, to one Calf; and when the first comes in sight, and bursts, the Cow is at calving. If she cannot part with it, put your hand up to feel if all is right, and if not, endeavour to put the Calf right as well as you can. If the Calf is right in the Cow, it will have its back to hers, and a fore-leg on each side of its head. When this is the case there is no fear of the Cow not parting with it; but even in this case she will want a little help sometimes.

In some cases one foot is right and the other wrong, but be sure to get both feet right before you offer to draw the Calf. Be careful to have the back of your hand next the calf-bed, that you may not hurt it with your fingers.

If the Cow pain much against you, raise her behind to give you more room.

Sometimes the hinder parts of the Calf come first, with both the hind-feet down: then let some one that is by put his left arm into the Cow to find the tail, and put his fore-finger and thumb under it, and thrust the Calf into the Cow; then you, with your right hand, fetch the feet up, and then it will come as well as

with the head first. If the Cow pains much against you, your arm will be cramped, except the Calf be thrust into her by the other person, as directed.

When I first begun business I was often put to it, before I got into the way of letting another person thrust the Calf into the Cow. If you set your back to the back of the man that helps you, and one use the right arm, and the other the left, there will be no danger. Sometimes the head is fallen back, and when you put your arm into the Cow you cannot find it: it may be under the Calf, in which case, turn the Calf over, and then try to find it; and if you do not, raise the Cow well behind that you may be more at liberty. Lay the Calf in as good a form as you can, and if the head still falls back, put a crook into the nose, made for that purpose, with the point turned in, in the form of a ring, that it may catch nothing to do mischief. Sometimes the neck of the Calf is twisted, but it must be straightened before the Calf is drawn.

Sometimes there are two Calves, one right and the other wrong. Before you attempt to draw either of them, be careful to get hold of two feet of the same Calf. There is little danger of a Cow that has two Calves not doing well, for they are often smaller than when there is only one. Sometimes there are three Calves, and only two got out. In my time I have known this happen several times, and the third has been left in till it has caused the death of the Cow. I advise every person that helps a Cow to calve, to put his arm in to feel if all is right, and whether she has any more

Calves in her, and also if the calf-bed is in its proper place; for sometimes it is drawn back to the isin by the navel-string, which I am of opinion is the cause of the calf-bed coming down after calving. Sometimes when you have drawn the fore-part of a Calf out of a Cow, it will stick at the huck bones, and you cannot get it any further. When this is the case, never stand with the Calf, but cut it in two at the small of its back, and take off the fore-part and the entrails; then thrust the other into the Cow again, and turn the feet first, when it will come easy.

When a Cow is long in calving the hair of the Calf often gets dry: in that case, grease it well with hog's lard, or butter, and it will pass the isin-bone much easier.

When the Calf is swelled, or in a Dropsy, (this is the worst kind of calving,) its head is so large that the passage is too small for it, and its body so much swelled that there is neither room to draw it, nor to stir it in the calf-bed. In this case the Calf must be stabbed with a lancet, or sharp-pointed knife, in many places, (wherever you can get the lancet in.) Then give the Cow as follows.

1 oz. of Tincture of Opium.

2 do. Spirits of Sweet Nitre.

Bed her well down, and leave her to rest. If she is pretty easy 24 hours after, feel if the swelling of the Calf is abated; if it is, you must try to get it from her; but if not, you must repeat the above medicine, and leave her for 12 hours more. By this method I have

saved several Cows. As for slipping shoulders, and such things, I can give you no directions: they must be done by those who understand the business. I have had nearly to quarter a Calf before I could get it from the Cow; but, as I told you before, never cut the neck of the calf-bed, for Cows that are cut mostly die: give it time and it will open of itself, or it may be opened with your hand.

After a Cow has had a hard time in calving there is great danger of an inflammation coming on, or of the calf-bed falling down, for she mostly strains herself much after the Calf is got away, so that I would advise the following to be given to remove the after-pains.

1 oz. of Tincture of Opium.

2 do. Spirits of Sweet Nitre.

And, to prevent an inflammation, give—

1 oz. of Peruvian Bark, in powder.

This may be mixed with the last. Lay the Cow as high behind as you can, to keep the calf-bed in; and if the barren swells, as it often does, rub it well with oil of swallows, or oil of elder. If she does not cleanse in due time, give—

1 oz. of Spermaceti.

1 do. Gum Myrrh, in powder.

2 do. Juniper Berries, do.

2 do. Bay Berries, do.

1 do. Birthwort Root, do.

2 do. Aniseeds, do.

To be given in cold ale. Much more might be said about calving, but what is here laid down includes most of the common cases.

Some will say that they cannot get into the calf-bed because it is drawn up in consequence of the Bull having been clapt; but, if this had been the case, it would not have caused the neck of the calf-bed to be drawn up, for the venereal process would have been quite different: I have before given the very reason.

It is not often that a Milk-fever takes place in a Cow that has had a hard time in calving, but should that be the case, you cannot do better than to follow the advice given in that disorder; but, before I conclude, I would advise all not to have their Cows in high keep at the time of calving, for there are five fat ones lost to one lean one, and few or none in low condition have the Milk-fever. But, should your Cow be forward in flesh, be sure to bleed well, and to draw the milk from her as much as you can before she calves; and by this means you may, perhaps, prevent further mischief.

INFLAMMATION OF THE NECK OF THE BLADDER.



This too often happens, especially when a Cow is in high condition, and has had a hard time in calving. To discover this disorder, which is not very easily done, observe the following symptoms, which are the most common. The Beast is very uneasy at getting up or laying down; it only lays down for a few minutes, and then gets up again, wags its tail, looks back to its hinder parts, shifts its legs to make water, sometimes parting with a little, and sometimes none at all. The water it does part with is very clear, and if you catch it

in your hand you will feel it very hot. When the disorder has taken place, bleed well in the neck, and after you have drawn a good quantity of blood, give the following.

- 2 oz. of Cream of Tartar.
- 2 do. Nitre.
- 2 do. Syrup of Marshmallows.
- 1 do. Vinegar of Squills.

Put 8 ounces of linseed into a jar, and pour 3 pints of boiling water on it; clear it off in 5 or 6 minutes, and give the above in the tea. (Powder the nitre before you put it into the tea.) Make the linseed into a mash, and give the Cow it for food. Repeat the above in 12 hours. Warm, diluting glysters are very proper, therefore give one every 4 hours. Concoction of marshmallow roots will answer well for glysters; but if you cannot get it, make them of linseed tea. Fomentations will also give ease. If there is a person at hand who understands how to draw the water, it will be very proper to do it. Be careful to give the Cow nothing that is heating, and be sure to keep her body open, for if she is bound it will go poorly with her.

Linseed, rye-meal, boiled turnips or carrots, and such things, will prevent her being bound; as for giving many different medicines, it would only be a burden to the owner, and do no good. Parsley roots, boiled onions, wild carrots, nitre, cream of tartar, squills, marshmallows, castile soap, and such things are the best medicines I am acquainted with.

FALLING DOWN OF THE CALF-BED.

This often happens after calving. When it takes place, be careful to wash the calf-bed well, and re-

move every part of the cleansing from the roses of it, if they will part easily; but be cautious not to damage the roses, for when the Cow is not at her full time, they sometimes part hardly; but you had better leave some of the cleansing on than injure the calf-bed by forcing it off. If the calf-bed has been down some time before it is discovered, (especially in winter,) and is cold, be sure to foment it with milk and water, to bring it to a natural warmth, before you put it up, for if you put it into the Cow cold, it will give her great uneasiness, and cause her to throw it down again, and there will also be danger of it bringing a disorder on her.

Some people are so foolish as to put powdered rosin on the calf-bed to keep it up: this way of proceeding is without knowledge, for instead of keeping it up, it is the direct way to cause the Cow to throw it down again; for reason will tell any man that the Cow needs nothing in her calf-bed but what nature formed there.

When the calf-bed is thrown out of the Cow, it is something like the lining of a hat when fallen out. When you put it up, have the Cow on her feet, oil your hand, put your fist to the lower part of the bed, and when you come at the barren, or what is properly called labia pudenda, thrust gently with the back of your hand, and let the lowest part go in first. If you cannot get it in this way, let some one hold the calf-bed up in their hands, and then thrust it in by degrees.

Let that part nearest her barren go in first; and when you have got it into its place, put your hand in-

to the Cow as far as you can reach, that it may not be left double, but be right placed. Keep her as high behind as you can that she may not throw it down again.

It will be very necessary to give 1 ounce of tincture of opium in a pint of warm ale to remove her pain.

Another grievance that frequently happens is the falling down of the neck of the calf-bed. This frequently occurs when the Cow has the Calf in her, and sometimes to one that is not with calf. It is easily put up again, for if you put it into the barren it will go to its own place; but it is bad to keep there. There are trappings made for that purpose by the saddlers, and I have known Beasts wear them for 6 months together. Some put a skewer, with a hole in the end to fasten a soft band to, across the barren; and then wrap the band round the skewer to tie the lips together; and a cork on the sharp end to keep it from pricking the tail. Some sew the barren up with a leathern strap; but in that case be careful not to put the stitches too near each other, so as to stop the urine; but trappings are the safest and the easiest. When the yambs come down before a Cow calves, she generally has the easiest calving, but there is most danger of the calf-bed coming down.

When a Cow's pains are very strong after putting up the yambs or the calf-bed, sometimes an awl, or pricker, put through the skin of her back, and tied with a sharp cord underneath, is a means of preventing her paining so much; for when she thrusts up her back it gives her pain there, and forces her to yield to the grievance.

I hope the hints that are here offered to the public may be useful to some candid readers, but many headstrong people are determined to have their way, although their plans are not half so good. I can assure my readers that in many years' practice I seldom found the above experiments to fail; and I have been fetched nearly 20 miles. When the best judges near the place have failed.

THE SCROPHULA, OR SCAB.



This disorder is not very common, but when it does appear is often neglected. At the beginning, people take it for some other disorder breaking out, and the old saying is, *It is better out than in*; but at length the disorder appears to any one that is at all acquainted with the diseases of Beasts.

When this grievance is checked in time it is much better both for the Beast and its keeper, for it is a most troublesome disorder. Some may say that it is only a surfeit that is breaking out: so it may; but such surfeits bring on the scab. You say, perhaps, that a surfeit and the scab are different things: so they are; but you must allow that a surfeit may turn to the scab. When there is a heat in the skin, and a dryness in the hair, and the Beast is constantly rubbing itself against any thing that is near, you may make yourself sure that it has got this disorder. I have known the complaint continue so long that the neck and back of the Beast have been nearly covered with scales.

In the first stage of this disorder the skin, or hide, is hot and dry, but the insects soon gather more together, and then it breaks out into little ulcers, when it may justly be called a Scrophula. The ulcers will throw out a thin matter, which is very offensive both to the Beast and its owner: then the ulcers will turn to scales. You will say "*We cannot see any insects.*" No, you cannot with your naked eye; but with a glass you may.

If there are many Beasts together, the disorder will spread among them all if not prevented. The first thing to be done is to give cooling, opening medicines, viz.—

- 4 oz. of Flour of Sulphur.
- 1 do. Jalap.
- 2 do. Cream of Tartar.
- 1 do. Æthiop's Mineral.

Give it in a little warm gruel, or beer, 3 times, 2 days distance between each time; or, if it works the Beast sharply, let the distance be 3 days. When you have given the first dose, rub with the following.

- 8 oz. of Sulphur Vivum.
- 4 do. White Hellebore Root, in powder.
- 1 do. do. Preeipitate.
- 4 do. Flanders Oil of Bays.
- 3 pints of Fine Whale Oil.

Melt the oil of bays, and mix it with the whale oil; then put the other articles to them, and mix the whole well together. When you rub it on, be careful to miss no part, and it will cure the Beast; but if any part is missed, you may rub it with a little sulphur vivum and white hellebore, mixed up with butter-milk. (When

the disorder is slight this will cure it.) If you have any more Cattle that have caught the infection, rub them at the same time: also wash the places they have rubbed against, with quick lime and water, to remove the infection.

Let me entreat you again to get rid of this troublesome and fulsome disorder as soon as you can, for the longer it remains uncured, the worse it is to cure; and as Cattle that have it are growing worse every day, their keep is quite lost. If you rub the above ointment well into every part affected, it will cure the disorder be it ever so inveterate.

LICE, IN CATTLE.



I need not say much upon this head, for it is well known to Cow-keepers, but one thing I will say, the sooner you get rid of them the better, for they make a Beast always uneasy, and its keep is in a great measure lost. I would advise all that have lousy Cattle not to apply quicksilver, for *many a Beast has been killed by rubbing six-pennynorth of quicksilver on it to destroy lice*. You may think *that* a small matter to kill a Beast, but I assure you it will. Mercurial ointment, or mercury in any form, does mischief. Use the following and there will be no danger.—Two ounces of staves acre, in powder: boil it lightly in 3 pints of chamberlie, and when nearly cold rub the Beast well with it: Be careful to rub the powder on with the chamberlie. This quantity will do for a small Beast, but a large

one will take 3 ounces of staves acre, and 2 quarts of chamberlie.

There are two sorts of lice; the smaller sort are worst to kill; the larger may be killed by snuff, or white hellebore root in powder, or capsico berries in powder, all rubbed on dry; but staves acre is best for either sort of lice.

THE TURN, OR STURDY.



This disorder chiefly happens to young Beasts, but some have it that are full-grown. It is known by the Beast holding up its head, and chiefly on that side where the bladder lays: it will often turn round, and it walks as if it was blind. This is caused by a bladder filled with water and many small seeds, which lays just below the roots of the horns, between the fore-face and the brain. You may know which side it is on by the Beast holding its head lowest on that side, and the bone will also feel softer on the side where the bladder lays.

Sometimes the bladder lays quite under the roots of the horns, and then it cannot be taken out without killing the Beast. When this has been the case, I have known it to puzzle some that were good judges of the disorders of Cattle, and they have called it Frenzy, or Inflammation of the brain, and Madness, when it was no such thing. If the bladder lays close to the bone in the face, about half way between the eyes and the roots of the horns, it may be got out with safety.

Cut the skin about 2 inches square, (leave it uncut at the top,) and then take off about half an inch of the bone with a chisel; then hold the nostrils for a short time, and the bladder will come out. Do not burst the bladder if you can avoid it, and do not put the piece of bone into its place again, for it will do harm and no good, and the place will fill up with flesh. Put down the skin, and lay on a plaister made of butter and common turpentine: dress the place every other day with it till well, and if the skin does not fasten again, cut it off, and fresh will grow.

It sometimes happens that another bladder forms in the same place, if so, it is easier to remove than the first, as the place in the bone is better to open.

Keep the Beast in the house for 3 or 4 days, guard against cold as much as you can, and give warm water. It will be proper to let blood, to keep off an inflammation. I have given you proper directions how to proceed in this disorder, but I advise those who have Cattle in it to kill them if they are full of flesh, for it is a disease that is seldom cured.

A SLOUGHED OR BROKEN HORN.



This frequently happens among Horned Cattle, and I should have passed it by had it not been for one reason, which is this:—*When a horn is broken off near the head, it gets wrapped up with a little tar and tow, and a cloth round them, and very often little or no further notice is taken of it; but I have known very great griev-*

ances caused by such neglect, for sometimes in summer the flies will blow it, and maggots will breed; and the roots of the horn being hollow, the maggots can conceal themselves in the cavities: at other times the end of the horn heals up, and the inside is full of matter. In both these cases I have known Beasts become nearly mad, by the brain being inflamed; so that I advise those who have a Beast with a horn dangerously broken, to dress it every other day till well.

Sometimes when a horn is broken in the middle, and is not parted from the coak, the best way is to take the broken part off, when it will soon be well.

When a Beast has sloughed a horn, and left the coak on, I have known a very large wen grow on the end of the coak: when this happens, take the horn or coak off with a fine saw, about 2 inches from the wen; have a wet bladder ready, and as soon as you have cut the wen off, put the bladder over the end of the horn, and twitch it fast with a string round the horn, and you must tie the string round the other horn, as the blood will force it very much. Dress it with tincture of myrrh and yellow basilicon.

Sometimes both horns are broken off near the head: in that case, fix a roller quite round both horns, and let it go under the throat. If this happens in fly time, keep the Beast in the house till nearly well.

THE QUINSEY.

This disorder is very common among Horned Cattle of all kinds. At the beginning the Beast slavers

much, thrusts out its head, its spirits are depressed, and it stirs little about. If it is summer-time, it will be often under the hedges, chewing leaves of trees and putting them out again, and if you examine you will find the roots of the tongue much larger than usual, also the vives, near the ears, are much swelled. When you find that the Beast has this disorder, take it into the house, and rub it with the following.

2 oz. of Oil of Swallows.

2 do. do Turpentine.

2 do. do Linseed.

2 do. Spirits of Sal Ammoniac.

Shake them up well together, and rub the Beast 3 or 4 times a day, to try to turn the disease back again. Let its food be chiefly meal and water, for it cannot swallow any thing that is hard.

Sometimes the swelling breaks inwardly, and discharges itself at the mouth. When that is the case the Beast soon gets well; but when the matter gathers into a bag at the roots of the tongue it is very tedious.

I have known a rowel, or a seton, when put into the swelled part, be of great use; but if it will not remove the disorder, you must use the knife; and few people are qualified for the work, because there is the neck vein, the artery, the windpipe, and the gullet in the part, so that it requires a skilful hand to perform the operation without injuring any of them. In my time I have cut many, and I do not know but that they all did well.

Some Beasts have had a bag of matter at the roots of the tongue, which has not been perceived till they

were dead. The bag laid on the upper side of the gullet and windpipe, and was not discoverable either by the eye or by the touch.

The Swelling in the vives, (commonly called the Bur,) is often taken for the Quinsey. This lays between the ear and the roots of the tongue. I wish people to be careful in distinguishing between these two disorders, for the latter is of little consequence compared with the former.

If you have the knife to use in the Quinsey, and make an opening into the bag of matter, keep the orifice open with tents made of tow and yellow basilicon, till the matter is discharged. A wash, made as follows, will be very proper to syringe into the wound till it is well.

4 oz. of Spirits of Wine.

1 do. Roach Allum.

$\frac{1}{2}$ do. Camphor.

Powder the alum and camphor well, then put all together, and let them stand for 3 days, and then add 2 ounces of friar's balsam:—this is an excellent wash for any green wound.

For the Swelling in the vives, rub well with the following, and the cure is completed.

2 oz. of Spirits of Hartshorn.

2 do. Sweet Oil.

The Quinsey is not so soon cured; and I am not acquainted with any other medicines, or method of treatment that will be of service; neither do I desire to fill the book with many recipes, when those that are laid down will do.

THE FOUL IN THE FOOT.



There are so many sorts of Fouls very different from each other, that I cannot give you proper directions for their treatment unless I mention them separate. I shall therefore explain the 5 different sorts that are most common.

THE BLOOD FOUL. This comes on very suddenly, and generally happens to a Beast that is fast feeding, or to one that is full of flesh. One day it appears well, and the next has a foot much swelled, and is very lame indeed: its claws are thrown a distance from each other; the foot is very hot, and the Beast is constantly shifting it. This disorder is often mistaken, and improper drugs applied, such as verdigrease and vitriol, and others that are of a heating, drying nature, which is heaping fuel on the fire to put it out.

When you find a Beast afflicted with this sort of Foul, lay a poultice of turnips and a little oil, or hog's lard, on for the first 3 days: if you cannot get turnips, use rye-meal, or linseed-meal. On the fourth day make an ointment as follows.

4 oz. of Soft Soap.

1 do. Potash.

Beat these well together, and lay them on a pledget of tow; put it quite through, between the claws; bind it on with a cloth made for the purpose with two holes in to let the claws through: fasten it on above

with a string, or sew it on, that it may stay in its place: let it be on 2 days, and then take it off and examine the foot well, to see whether there is any discharge of matter, for in 6 or 7 days it will break, and in 8 or 9 days a bur or coak will come out from between the claws: then lay on a little more soft soap and potash, till you get a clear bottom; and then apply green salve to heal it. Make green salve to keep for use as follows.

- 4 oz. of Common Turpentine.
- 2 do. Bees Wax.
- 2 do. Rosin.
- 2 do. Honey.
- 1 do. Verdigrease.
- 12 do. Hog's Lard.

Powder the verdigrease fine, melt all the other articles together, and put the verdigrease in when they are nearly cold, stirring them well, that it may not go to the bottom.—This is a good salve for any wound, and should always be kept in readiness. If there are any pipes, or proud flesh on the sore, eat them down with blue stone vitriol.

Sometimes the Blood Foul breaks out above the claws, and in that case is very troublesome, for it gets among the bones, (as a twitter does in a horse), and keeps breaking and discharging matter by pipes:—as one heals another breaks out; and sometimes 2 or 3 places discharge at once. When the pipes throw out white matter, eat them out with a little corrosive sublimate about the size of a pea, and wash with the following.

- 1 pint of Vinegar.
- 1 oz. of Bole Armenian.

$\frac{1}{2}$ oz. of Verdigrease.
 $\frac{1}{2}$ do. Vitriol.
 $\frac{1}{2}$ do. Crude Sal Ammoniac.
 4 do. Honey.

Put all together, and simmer them over a slow fire for half an hour, stirring them all the time; then take the mixture off, and put it into a pot for use.—This is a powerful dryer, and will also cure the Stinking Foul, and the Foot Rot in sheep. if the feet are kept dry for a short time after. As long as any pipes throw out matter they must be eaten with corrosive sublimate or caustic; then wash with the above, and lay the green salve on to heal with.

I have known this complaint continue 12 or 14 weeks, and when it does well it remains 7 or 8 weeks.

There are 32 small bones in a Cow's foot, and if they are affected you need not expect a cure very soon; but I advise you to prevent this, by poulticing well, and not using drying medicines at the beginning of the Foul. As this disorder is infectious, you should be careful to keep the Beast from others as much as possible; for if another Beast (whether full of flesh or not) treads where the lame foot has just been, it probably will catch the disorder.

THE BONE FOUL. This is a lameness that comes on imperceptibly. There is nothing to see but a redness between the claws where it should be white, and the foot is also a little hotter than usual: The Beast grows lamer every day for 8 or 10 days, and then you may see a little swelling above the claws, sometimes over one claw and sometimes over both. In this case, take

- $\frac{1}{2}$ oz. of Oil of Origanum.
- 1 oz. do. Turpentine.
- 1 do. Spirits of Sal Ammoniac.
- 1 do. Oil of Amber.

Put these all together into a phial, and rub well every day, to force the disorder back again. Should it come forward so as to break, you must treat it the same as the Blood Foul. This disorder is not so common as the last, and is not catching; but it has often puzzled both keeper and doctor, and has been taken for a lameness somewhere above, till in time it proved to be in the foot.

THE FROG FOUL. This is a substance that rises between the claws, about the thickness of a finger, and sometimes the skin is not broken at all. It continues for some time, and keeps the Beast a little lame. When you find a substance of this kind, cut it off with a sharp knife, and lay on a pledget made of

- 1 oz. of Soft Soap.
- 1 dram of Corrosive Sublimate.

Mix them well together and it will serve for 2 dressings, at 3 days distance; and it will be as much as you will want: then heal the place up with the green salve recommended for the Blood Foul. If any proud flesh rises, eat it off with blue vitriol.

I have cut the Frog Foul out with a knife, and sometimes with a red-hot iron about an inch broad, made sharp at the end: this last will take it off as well as any thing, and leave the part so as to cure in the shortest time. There is a vein which feeds the Foul, and which must be destroyed; or the substance will rise a-

gain; but be careful not to go too deep.

THE SHAG, or ANGLEBERRY FOUL. These may properly be put together, as they are of the same nature. It mostly takes place at the heel, and spreads as big as a half-crown, almost like a seeded wart; and sometimes it is also on the fore-side of the foot, but not so much as behind; and it is generally on the hind-feet. This disorder, as well as the Stinking Foul, is owing to the blood being in a thin, bad state, and is much like the grease in horses' heels.

Bleed pretty freely, and give a Felon drink; then touch the place with oil of vitriol every third day till better. This Foul soon disappears, but some Beasts that have bad feet are troubled with it at times all their lives, especially during a long wet season in summer, or after standing in the house dirty.

Some people turn their Cattle out in winter to water where there is much dirt, and I do not know a readier way to bring on this complaint. I advise all Cow-Keepers to mend the roads to their watering-places, when needful. It would be much better for Cattle if people would use their reason, for that would inform them that *a Beast must be more comfortable when standing in the house clean and dry, than when daubed up to the knees with dirt.* Sensible people would consider that a Beast can feel as well as themselves! if they get their feet wet or dirty, they do not think it proper to sit or stand so; and it is the same with the Beast. If I had a Beast in the house in winter, I would carry it water, rather than turn it out into the dirt, if I could not mend

the road to the watering-place. Some people have it not in their power to remove this evil of bad road without being at a great expence, materials being at a considerable distance; but some have them at hand, and neglect to do it; and I may justly add it is much to their shame to see an evil and not to remedy it when they are able.

THE STINKING FOUL. This is easily cured by drying up the juice that springs up between the claws. If you use the wash that is recommended for the Blood Foul, it will cure it by 3 times washing; and if you have not that ready made, 2 pennyworth of egyptiacum will do it; or a little verdigrease mixed up with tar and butter; or a little blue stone vitriol, dissolved in water. Any of the above, well washed on, will cure the Stinking Foul.

LAMENESS.



When a Beast has been a long time lame the claws grow long, and are very troublesome to it, so that I advise you to cut them. Take a block of wood, put the foot upon it, and with a mallet and chisel strike off as much as you think needful.

Sometimes gravel works down into a Beast's foot, as it does into a horse's, and must be cured in the same manner; but a horse's foot and a Cow's are made quite different; for in a horse's foot the rims or shelves in the inside of the hoofs turn upward, which causes the gravel to go up and out at the top; but a Cow's turn

downwards, and when the gravel gets in it stop s there, so that a Cow is much better to cure.

Beasts are often lame in summer; sometimes it is caused by flies, and at others by riding another Cow, when in bulling; for they will **come off** on one side, and leave the other on the Cow's back, and either nearly tear the shoulder from the body, or put it out of joint. (When the shoulder is out of joint it stands off from the Beast.) Put a cord round the foot, and draw it under the Beast's belly, and if it comes down on the lame side, its weight will force the joint in again.

If the Lameness is in the cup bone or the udder joint, you must try whether the cap be shifted in the stifle joint or not. (Sometimes the tendon is thrown on one side.) When Lameness is caused by any of these accidents, the part must be put right before you can expect a cure. Rub any part that is disordered with the following.

- 1 oz. of Oil of Origanum.
- 1 do. Spirits of Turpentine.
- 1 do. Spirits of Sal Ammoniac.
- 1 do. Oil of Amber.

This mixture is what is called the *Strong oils*; it is very penetrating, and is good for many kinds of Lameness. There is another mixture, commonly called the *Horse bottle*, which is made of the following.

- Oil of Origanum.
- Do. Turpentine.
- Do. Swallows.
- Do. Worms.
- Do. Spike.
- Do. Peter.

Spirits of Wine.

Opodeldoc.

Two or three pennyworth of each, as the buyer thinks proper. This mixture has been much esteemed in the west of Yorkshire, but I do not think it calculated to do much good: neither the spirits of wine nor the opodeldoc will mix well with the oils; and oil of spike and oil of peter are not much different from oil of turpentine. In my opinion, the following mixture is much better.

$\frac{1}{2}$ oz. of Oil of Origanum.

2 do. Spirits of Turpentine.

$\frac{1}{2}$ do. Oil of Bricks.

Mix these together, and they are very good for a sprain. A Beast's hide is so strong that it requires a sharper mixture to penetrate it than a horse's does.

WOUNDS.



As for Wounds in general, there can be little said about them by way of directions, but a few recipes may be of use, and be a help to the Cow-Keeper.

Much depends on the nature of the part where the Wound is received:—if it is a fleshy part, endeavour to keep the lips of the Wound open:—if it is a bony part, keep them together. The *udder joint*, and the *pope's eye* are the most dangerous parts. If the Wound is near either of them, draw a few stitches through the skin to keep the lips together, and to prevent the cold air from entering. In 3 or 4 days the Wound will begin to matter; and if the pus is white, mixed with a

little brown, it is a favourable sign; but if it is a brown, glueish matter, with a clear lie the colour of vinegar, it is a bad sign.

Sometimes a Beast gets staked, or another Beast pushes its horn into it. In these cases search the Wound to the bottom, and if nothing be in it, syringe the following into it; which is proper for any fresh Wound.

2 oz. of Gum Benjamin.
 2 do. do. Styrocks.
 2 do. do. Myrrh.
 2 do. do. Guaiacum.
 2 do. Aloes.
 1 do. Balsam of Peru.
 1 do. do. Tolu.
 2 do. Frankincense.
 4 quarts of Rectified Spirits of Wine.

Powder those that will powder, put the whole into a bottle, and let it stand for 5 or 6 days, often shaking it up:—this is an excellent mixture for green Wounds; and also to take inwardly for the Cholic in either man or beast. It is nearly the same as what is sold in the shops by the name of friar's balsam, balsam of life, vuliner's balsam, balm drops, and tincture of benjamin. You may reduce the quantity as much as you please. Tincture of myrrh is made as follows.

2 oz. of Gum Myrrh.
 1 do. Aloes.
 1 quart of Rectified Spirits of Wine.

Mix these as the last, and the mixture will cure green Wounds. I need not mention any more tinctures, for you can have no better; and as for salve, that which

is recommended for the Blood Foul, and yellow basilicon will answer every purpose for green Wounds.

When a Wound has been some time in healing, proud flesh will appear; this you must eat off with precipitate, lunar caustic, or blue vitriol; and be careful to keep the Beast in the house, and to give it warm water. When the Wound is dangerous let the tow be clean, and of a good quality, such as is called surgeon's tow.

Sometimes a Beast gets a push on the body that breaks the inner rind so that the bowels come through, and leaves the skin whole: if the hole is large enough there is little danger, but sometimes it is small and receives part of the bowels, which fills with wind and sediment so that it cannot get back; this causes a twitching in the inner rind, and brings on an inflammation in the bowels. When this happens there is no remedy but by cutting the skin a little above the Wound, and putting the bowels back again into the body, if it can be done, and make the hole in the rind larger either before you put the bowels in or after, only be careful not to cut the bowels. Some pretend to sew up the rind, but this cannot be done so as to answer any good end, but you must sew the skin close after having had to open the rind to let the bowels pass. When there is a sufficient opening made in the rind, the bowels will lay in the skin, and grow less and less as the rind closes up. Lay on a plaister made of wheat-flour and the white of eggs, which will stick faster than any salve you can get.

Cancers sometimes happen to Horned Cattle, a cure

for which can hardly be expected, therefore, when you see any appearance of a Cancer I advise you to feed the Beast as soon as you can, for if you was to get it cured the remedy would perhaps be worse than the disease. Cancers generally take place on the fundament, or barren, or on the lower chap. To recommend any thing for the cure of them would perhaps do harm instead of good.

ANGLEBERRIES, OR ANBERRIES.



These are more troublesome than dangerous. In summer Cattle are made very uneasy by flies, and are so busy driving them off that they have not sufficient time to eat and rest, therefore it is no wonder that they grow thin of flesh and are subject to this disorder. It may easily be cured at the beginning, for before the Angleberries or Warts grow strong you may pull them up with your thumb nail, only be sure to put your nail close to the bottom of them, then put your forefinger close to your thumb, and give a sharp twist, and the seed will come out like a white pea. I have pulled many off the paps and other places in this manner. When they are neglected they grow very strong, and then other methods must be used. Take a pair of clams, such as gelders use, have the Beast down, and put the clams just to the bottom of the Angleberries, have a red-hot iron ready to sear them with, and you may either cut them off with the knife or with the iron. Be careful to keep the clams fast till you get the place sear-

ed, for if the Angleberry be strong, the vein will be strong also.

Some Angleberries are very dry, and not much higher than the skin; then you may kill them with soft soap and corrosive sublimate, as is recommended for the Frog Foul; but tie a small sharp cord tight about the roots of as many as you can, and they will die away. Oil of vitriol or caustic will destroy many. Sometimes they are so near the eye that you can put nothing on them but soft soap and sublimate, and you must be careful of it that none may get into the eye.

People have often young Beasts with Angleberries on their paps, and do not think of it till they are near calving, when there is not time for the Angleberries to be taken off and the places to heal. I have known Beasts have so many that I could not tell where the paps were; and in my time I have taken a bushel off at a time, and only got one half for fear of the Beast losing too much blood. When there are so many they stink so as almost to suffocate one. It is a great shame for people to be so negligent: it appears as if they neither respected themselves, their Cattle, nor their families.

THE GARGIL.



This is mostly brought on by cold from sudden changes. Sometimes in summer the weather is very hot, and a thunder-shower causes the air to turn cold, and this change affects the whole body. A Beast in this

disorder slavers much, hangs down its head, looks red in the eyes, is sometimes seized in a limb, or in both the hind-quarters, trembles much, is not fond of stirring, throws up its back, and its hair is dry and stands nearly upright on its back; and no wonder, for the sudden cold has nearly stopped the circulation of the blood, which causes the pores of the skin to be nearly dried up. The first thing to be done is to bleed well, and to give the following.

2 oz. of Grains of Paradise, in powder.
 1 do. Galengal, do.
 1 do Ginger, do.
 2 do. Turmeric. do.
 2 do. Mithridate.
 2 drams of Saffron.
 1 oz. of Aniseeds, in powder.

All to be given in a quart of warm ale; but should the disorder fly to the lungs, and bring on a hoose, or cough, give the following.

2 oz. of Spanish Juice.
 2 do. Liquorice Powder.
 2 do. Elecampane, in powder.
 2 do. Honey.

Cut the juice small, and dissolve it in a little hot water, and give the above all together in linseed tea, barley-water, or sweet wort.

Violent colds bring on many disorders, and are often the forerunners of the Quinsey, the Felon, and the Grass Fever, or the Felon in the bag and limbs; so that I advise every Cow-Keeper that has an opportunity, to house his Cattle when a sudden change of weather

takes place about midsummer, or between that and lammas, in order to prevent disorders, for they are easier prevented than cured, and especially the Grass Fever. I am fully persuaded that sudden heat or cold brings on most disorders, for if you consider how fast the blood circulates when the body is hot and the pores of the skin all open, and how a sudden cold wind and rain stops the motion of the blood and chokes up the pores, you will not wonder that other disorders follow,

How many disorders are brought on by neglect I cannot determine, but I am certain that many might be prevented that are not.

THE FELON, OR HIDE-BOUND.



Many disorders that go by this name are nothing of the kind. Too many pretend to know something about a Cow that know nothing about this complaint, but give other disorders the name of Felon; and some make 4 kinds of Felon, viz. Hidebound Felon, Heart Felon, Water Felon, and Cripple Felon, or Felon in the Limbs. This is chiefly for want of knowing the disorder. Let me again beg such false pretenders to be silent, and when they know nothing to say nothing. If such people would deliberate a little before they give their opinions I believe many of them would be silent, unless they said they did not know what was the matter with the Beast, and then they would tell the truth. In my time I have known hundreds of Cattle killed by following the advice of ignorant people; and have e-

ven known many Cow-Keepers that would give advice to others, and yet could not trust their own Cattle to their own judgment. It appears to me that such people want to learn something at their neighbour's expence, which is not *doing as they would be done by*, nor *loving their neighbour as themselves*.

The following are the symptoms of the Felon, or Hidebound. The Beast's hide is stiff, and not good to get hold of, it loses its flesh, walks stiff in its limbs, its eyes look dim and water, its hair stands straight on its back, and it neither eats nor drinks so freely as it should do. When you find a Beast in this state you may be sure it has the Felon, and I shall lay you down a few recipes for the cure of it. The following is for a strong Beast.

-	2 oz. of Beast Spice.
-	1 do. Turmeric.
-	1 do. Powder of Aniseeds.
-	1 do. Canary Seeds, in powder.
/	2 do. Ginger, do.
	2 do. Grains of Paradise, do.
	1 do. Diapente.
	1 do. Sweet Fennel, in powder.
	1 do. Mithridate.

This is what is called a Felon drink for a strong Beast. All must be mixed together in 2 quarts of ale, with a little treacle; to be given fasting, and to fast 3 hours after; and give the Beast a little warm water before it gets cold. The following drink is not quite so strong, and will answer for most Beasts of common size.

- 4 oz. of Flour of Mustard.
- 1 do. Beast Spice.
- 1 do. Diapente.
- 1 do. Aniseeds, in powder.
- 1 do. Sweet Fennel, do
- 1 do. Caraway Seeds do.
- 1 do. Mithridate.
- 2 do. Powdered Ginger.

To be given in 3 pints of ale as above. The next is for the same purpose.

- 4 oz. Mustard.
- 4 do. Powdered Ginger.
- 4 do. Beast Spice.

To be given as above. The next is called a common Felon drink.

- 2 oz. of Beast Spice.
- 1 do. Ginger.
- 1 do. Aniseeds.
- 1 do. Long Pepper.
- 1 do. Diapente.
- 1 do. Fenugreek.
- 1 do. Turmeric.
- 1 do. Mithridate, or Venice Treacle.
- 1 do. Grains of Paradise.
- 1 do. Galengal.
- 1 do. Caraway Seeds.

To be given in 3 pints of warm ale, with a little treacle, fasting, and to fast 2 or 3 hours after. Give a little warm water before you turn the Beast out to the cold. To a very small Beast give half the above.

A herb drink for the same purpose is made as follows. Take 4 ounces of felon wood: horehound, featherfew, peppermint, wood betony, agrimony and rue, of

each a small handful: boil them in 3 quarts of water for 8 or 10 minutes, and when nearly cold strain the liquor from the herbs, add 2 ounces of mithridate to the liquor, and give it to the Beast. Any of these recipes will cure the disorder if the drugs are good, and I could lay down many more, but I do not mean to clog the book with recipes when no better can be had than those that are here.

Many people affirm that there is a worm in the Beast's tail, and cut it, pretending to take out the worm. This is a mean juggling trick of pretenders: they say there is a soft place in the tail which is occasioned by the worm, and affirm that if the Beast's foreteeth are loose it is a certain sign that it has the worm in the tail. I assure my readers that there is no such thing as a worm in the tail, but there is sometimes a gangrene, or canker in the tail brought on by the Hidebound or Surfeits; as to the teeth being loose, they are never fast, and are more loose when the Animal is poorly. The tail of a Cow has many joints in it, and runs smaller to the bottom. Within 5 or 6 inches of the end there is a small soft place, between the lump at the tail end and the bone, that is, where the bone ends, and there it is that false pretenders work their deception. There are 4 leaders, or tendons, that reach to the bottom of the tail, and also 4 veins that go just between the tendons, the strongest of which is on the under side of the tail. Hold the tail up, cut it lengthways, and put a skewer underneath the strong vein, between the tendons, and you may draw the vein out 3 or 4 inches long: if you break it off and lay it upon any thing that is cold, it

will stir and appear like a worm. Putting a setter in the tail (about 4 inches from the barren) is very useful when there is a gangrene in the tail. You may know when this is the case by the hair falling off, and the tail being crooked, and I have known it eat the tail off; yet it is easily cured by cutting the strong vein on the inside of the tail, next to the body. When you cut the vein, rend the skin with a skewer, and put a little bearsfoot, or docken root, and a little salt and butter into the place, and sew a cloth round it, but not too tight, for many Beast's tails have been taken off, and some above the fundament, by cutting the bone, or tying the bandage too tight.

THE FELON.



This mostly happens at the end of July, or in August, to Cattle that are feeding. Milch Cows, Oxen, & Heifers that never had a Calf are liable to it. I have known Heifers have it to such a degree that one quarter of the udder has dropped out. I need not describe the complaint it is so well known, but I will remark that there is a strong fever at the beginning.

Bulls and Oxen are chiefly affected in the limbs, which causes lameness. The first thing to be done is to bleed well. Some Graziers are against bleeding, but they are mistaken, for both reason and experience tell us that bleeding must be proper at the beginning of a Fever. If you bleed and physic your Cattle every ten days when the disorder prevails, it will prevent

many having it, and such as do take it will have it more mildly. At this season of the year high winds and cold rains are very frequent; and it often happens that when the weather is very hot a thunder-storm changes the air very quickly. At such times those that have an opportunity to house their Cattle, especially during cold rain, should do it. When you find a feeding Beast (not a Milch-Cow) afflicted with this disorder, bleed well, and then give the following.

- 1 oz. of Jalap Powder.
- 8 do. Flour of Sulphur.
- 2 do. Cream of Tartar.
- 1 dram of Calomel.
- 1 do. Tartar Emetic.
- 1 do. Cinnabor of Antimony.
- 2 oz. of Powdered Ginger.

Mix these all together, and give them in a little linseed gruel or onion pottage. This recipe is well calculated to cool and abate the fever, and to thin the blood. Glauber's salt is also a fine cooler:—in 3 or 4 days give 12 or 14 ounces of it, and 2 ounces of salt petre, dissolved in hot water, and given nearly cold. Repeat either of these as you find it needful: the first of them is one of the best yet found out for this disease, and the last is of great service.

Draw the curdled matter from the bag if you can, but if you cannot, and if a discharge is wanted, take hold of the end of one of the paps with a pair of pincers, and cut off about a quarter of an inch with a sharp knife, which is much better than slitting a pap as many do. When a Beast is very lame it lays much, and

when the grass is wet this is hurtful to it, therefore in wet weather it would be much better in the house. If the camrel joints in the hind-legs are much swelled, rub them with the following mixture, for it is often of great service.

- 2 oz. of Oil of Turpentine.
- 1 do. do. Origanum.
- 1 do. Spirits of Sal Ammoniac.
- 1 do. Oil of Bricks.

I have also known this mixture to be of great use in dispersing the jelly that lodges in the joints.

When a Milch-Cow has got the Felon, the above mixture may be applied to the limbs, but you must not give the same medicine as before, nor cut the end off the pap, but draw the curdled milk out of the bag as much as you can, 3 or 4 times a day: then give the following.

- 2 oz. of Cow Spice.
- 1 do. Long Pepper, in Powder.
- 1 do. Yellow Bark, do.
- 2 do. Nitre, do.
- 2 do. Venice Treacle.

Give it in 3 pints of warm ale, fasting, and to fast 2 or 3 hours after. Bleed well, and if the blood is dark-coloured and thick, bleed again the day following, and repeat the above drink. Should the Cow be costive, give 10 or 12 ounces of glauber's salt, and 1 ounce of jalap powder, in warm water. If the fever continues strong, give 2 ounces of peruvian bark, and 2 ounces of nitre in a little warm ale.

It is difficult to describe every stage of this disorder, as the symptoms vary much in different Beasts. If a

Cow refuses its meat, has a low pulse, and has not much fever, nor is costive, but has much oppression of spirits, give the following.

- 1 oz. of Turmeric.
- 1 do. Grains of Paradise.
- 2 do. Powdered Ginger.
- 2 do. Flour of Mustard.
- 2 do. Tincture of Bark.

Give the above in 3 pints of black beer. You will find it a comfortable cordial which will strengthen the Cow and help to renew her blood, and you may repeat it as you find it needful.

A DRINK FOR CLEANSING A COW AFTER CALVING.

- 1 oz. of Spermaceti.
- 1 do. Gum Myrrh.
- 2 do. Juniper Berries.
- 2 do. Bay Berries.
- 1 do. Round Birthwort Root.
- 1 do. Galengal.

All to be brayed in a mortar together till small enough. Mix them in 3 pints of cold ale, and give it fasting, and to fast 2 hours after. It seldom fails to bring the cleansing from a Cow; and if the cleansing has come away you cannot give a more proper drink after calving, for it helps the discharge from the calfbled which is commonly called fye, and both causes the Cow to milk better and to take the Bull sooner. Many people take the cleansing from the Cow, but I advise all Cow-Keepers never to suffer it to be done, for

I have known much hurt done by it, but never any good. If it could be done with safety I should know as I have had as much experience as most people. It is true the cleansing may soon be taken away, but I say again it cannot be done with safety, as no man can reach with his arm to the far end of the calf-bed; and if a person gets hold of the navel-string, and draws gently till the cleansing comes away, he does not know whether he pulls the calf-bed back or not, nor whether the roses have parted with the cleansing or not, and it is seldom that such pretenders are at hand just when the Calf is drawn, and can it be proper to force their hands into the calf-bed some hours after? No man of reason would attempt such a thing. The Lord and Maker of all things has provided nature with sufficient powers and he has not ordained man to work against him.

Some people are so sparing of their money that rather than part with one shilling they will run the risk of losing a pound, and rather than be at the small expense of a drink, will let the cleansing rot from the Cow. This is a great folly of short-sighted man, for he loses five times as much in the end, and does the Cow a great deal of hurt; nay, in my time I have known scores of Beasts lost by niggardly, covetous people who would be at no expense with them when disordered. I wonder that God permits such earthworms to have Cattle, for they not only hurt themselves but the public at large.

FOR A COW THAT IS SLOW IN TAKING THE BULL.

4 oz. of Cummin Seeds.

2 do. Eringo Root.

1 dram of Cantharides.

2 do. Cayenne Pepper.

1 oz. of Ginger.

This is commonly called a Bulling drink. First take the eringo root, bray it well before you put the other things into the mortar, and then powder all well together, and give it in 3 gills of warm ale the last thing at night: turn the Cow out in the morning, and most likely she will be in heat the day following. Sometimes 4 ounces of cummin seeds, powdered, and given in the milk of a Cow that is in Bulling will answer the purpose. To a young Cow give only half a dram of cantharides with the other ingredients; or, give the following.

4 oz. of Cummin Seeds.

1 do. Cayenne Pepper.

1 do. Long do.

1 do. Ginger.

$\frac{1}{2}$ dram of Cantharides.

Powder them well together, and give them in the same manner as the last.—This is much easier to the Beast, and mostly answers the end. In very cold weather there is no certainty of any thing answering the desired end; but I advise the Cow-Keeper not to force too strongly with cantharides, for then the Cow will not hold her Bulling; and I have known Cows continue in Bulling for some time after. The last drink is very safe, and the Cow will hold her Bulling never the less for it. The first is for a strong Cow.

PICKING.

When this grievance spreads among a number of Milch-Cows it is very troublesome, for, besides the loss,

the owner is kept in continual anxiety of mind.

When you see a Cow likely to part with her Calf, separate her from the others as soon as you can, if you have convenience; and as soon as she has parted with it, give her the cleansing drink, for this is an infectious disorder, and most of the infection is conveyed by the smell; and the longer the cleansing is in coming away, the more the air is infected, and the more the contagion spreads—sometimes over a whole village. I advise you to put tar upon the noses of your Cattle when this disorder prevails, and to burn stable hay, dried assafœtida, or wormwood, or to sprinkle spirits of tar, or any thing to make a strong smell, about the Cow-house, which keep as clean as possible, and whiten with quick lime. If you get any fresh Cattle they will soon take the disorder. In order to help to remove the infection give the following drink, and repeat it as often as needful. The times when a Cow is most likely to part with her Calf are at 18, 12, 9 and 6 weeks from her regular time of calving. Give the drink at each of these times except the 9 weeks, and bleed at the same time.

4 oz. of Bole.

2 do. Irish Slate.

1 do. Tormentil Root, or Comfrey Root.

1 do. Madder.

1 do. Prepared Chalk, or Crab's Claws.

Powder all these, mix them in a quart of cold water, and give it fasting, and to fast 3 hours after, and bleed well at the same time. If proper care be taken, as advised, and the drink repeated, as directed, you

will soon get rid of the disorder, as I am of opinion that there is not a better drink found out than the above, therefore more recipes are needless.

Some people are so foolish as to go to a witch-doctor when they have Cows in this complaint:—they give him some money, and he tells them some frivolous tale, such as that some person that wishes them bad luck, or looks upon them with an evil eye, lives at such a distance from them, and that there is a water to cross, and a tree growing not far from the house; and more such nonsense, which they guess the meaning of as well as they can, and which causes them to have a hatred to the person they suspect, which never wears off as long as they live; and that without occasion, as he is not guilty of the crime. This I have known to be a real fact, for the same people have applied to me afterwards, and had the disorder removed by the above medicine.

As I have gone through most of the disorders that are common to Horned Cattle, I shall conclude by giving proper directions for the rearing of Calves, for if they fall short the effect must soon be perceived.



DIRECTIONS FOR REARING CALVES.

People ought to be careful of their Calves, but I am of opinion that hundreds are lost that might be saved. If Cattle-Keepers would examine this little treatise well, and observe the following directions, one fifth more might be reared than are; but at present many are in want of proper directions, and others are too careless to pay attention to them. Most disorders in Calves may be prevented or removed by attending to the following advice.

THE HYAN, OR MURRAIN has killed great numbers of Calves, and although it cannot be cured yet it may be prevented. It is not above 20 years since I found out the medicine which prevents it, and I may truly say that it has saved hundreds. I happened to light upon it by trying experiments, and hitherto it has not been known to any other person, except two or three that have been in the shop with me. It is worth 20 guineas to great breeders of Cattle, and I dare affirm that not 1 Calf in 50 will be lost by this disorder, if the medicine is made of good drugs, and given according to my directions; besides, the expence is very little.

When a Calf is new calved take the slimy substance out of its mouth and nostrils; then examine whether the navel-string bleeds too much. Should the navel-string have been left too long, tie a thread fast round it, close to the belly; then cut it off near the thread, and

put the navel up into the body as much as you can. The next thing is to give a little senna tea, or cream of tartar; but senna is the best, as cream of tartar is apt to turn sour on the stomach. This is to clear the stomach and intestines of the slime that lays in them, before it becomes a hard substance.—Many Calves are lost by neglecting this. One pennyworth of senna is sufficient; but if the Calf be open in the body none need be given.

When Calf-Jobbers carry Calves to sell, they frequently fill them with water when they get near the market to make them look better. This is the ruin of many Calves that are bought at a week or ten days old, for it throws them either into **THE WHITE**, or **THE BLOODY FLUX**, or both. One Calf in four is lost in these disorders, which may be prevented. Perhaps you will say *How?* I answer, *Endeavour to get your Calves about home as much as you can, and if you cannot get them near home, go and buy them, and bring them home in your own cart, and then you will be sure that they are not filled with water.* But even in that case I have known some have the Flux, but they are much easier to cure, as the Flux is a natural one. Keep the place where they lay as clean as you can, let them have good bedding, and lay a chalk-stone for them to lick, for young calves will lick any thing they can come at.

The smell is very noxious in this disorder, and, as it is very infectious, it is best when there are a number of Calves together, to separate the disordered ones from the others as soon as you can tell which they are, and then to get them well as soon as you can.

Many medicines are given in this disorder, as well as in others, that are of no service. The Flux is much alike in all animals as to its nature, but reason will inform any man that a young Calf cannot bear a medicine as strong as a Cow. If the Breeders would give the following as soon as they find a Calf in the White Flux, I am of opinion that few would be lost in it.

1 oz. of Bole, in powder.

1 do. Tormentil, do.

1 do. Aniseeds, do.

Mix them well together, and give one third of the mixture to a weak Calf, or to a strong one give half, in a little old ale or brandy and water, one hour before you serve it, or two hours after, and give a meat spoonful night and morning till better. Twice giving generally cures, but if not, give a third or a fourth time.

Although the Bloody Flux is nearly the same disorder, yet it requires different treatment. It is mostly brought on by the White Flux, but not always, for it may be caused by licking sand, or by heat in the bowels. The inner coat of the bowels sometimes comes with the dung, which is mixed with blood, skins and slime:—this takes away the Calf's strength much sooner than the White Flux.

In both these diseases tincture of rhubarb is a great healer to the bowels, and I consider it as good a medicine as can be given to man or beast for disorders therein. The dose may be from 1 to 2 ounces, and repeat it in 6 or 8 hours. A small Calf should have 1 ounce, and a large Beast 1 pint. Isinglass, dissolved in hot water, is of great use in the Bloody Flux. Powdered log-

wood and gum arabic are great astringents, but tormentil root is one of the best in the whole catalogue of drugs, as I have known it cure many people of a Flux, or Looseness, after they had been under the doctor's hands some time:—the dose is from half a dram to a dram, to be taken in a glass of red wine 3 or 4 times a day; indeed, tormentil root and tincture of rhubarb are the best things I know for removing a Looseness, or Flux of the bowels; but the medicine recommended for the White Flux seldom fails.

Calves are liable to another disorder, which is caused by the milk curdling on the stomach. When this happens there must be sudden relief or it will cause sudden death, and it has killed many. The milk curdles in the second stomach as hard as blue-milk cheese, and sometimes cannot be removed. Oil of castor is the best thing that I know of for this disorder. Give

2 oz. of Oil of Castor.

2 drams of Senna.

Boil the senna in 1 pint of water, strain it off, and put the oil of castor to it, and give them to the Calf, taking care to give it no milk while the disorder remains. This complaint is easier prevented than cured. Sometimes the Cow's milk is the cause, but that is when she is disordered herself. It may happen to a kit Calf, in consequence of its milk being given too hot, which is the most dangerous case of all: but this may be prevented by mixing an equal quantity of linseed pottage with its milk. By so doing you will find your Calves to thrive much better than with milk alone, for linseed is both food and medicine to young calves. They

seldom ail any thing if they have plenty of it, and you may bring up twice as many with milk and linseed as with milk alone. Linseed cake is cheaper than linseed, but is not so good. If you take an equal weight of linseed, linseed cake, and back ends of wheat, and grind them all together, you will have good pottage for Calves, and at a little expence.

Calves should neither be kept too fat nor too lean, for in both cases they are very liable to disorders. I advise Breeders to keep them dry, and well bedded, as long as they have them in the house, for laying wet often brings on the CRIPPLE FELON, properly called the LUMBAGO, which is a lameness in the joints, with a little swelling, and keeps shifting from one joint to another and from one leg to another, and continues some time. The best remedy I am acquainted with is to setter them in the dewlap, and if you can get the setter to run well it will be of great service; but if not, put a seton in any part you can, only avoid the joints. The way to put a seton in is as follows.—Make two holes in the skin, about 2 inches distance, put a skewer in at one hole and out at the other, draw a small soft cord through, and tie both ends together. Rub the cord with common turpentine to make the seton discharge better. A seton is often of great use in cases of lameness in different parts of Beasts, and also in swellings. When you have put either the setter or the seton, or both, into the Calf, give the following.

$\frac{1}{2}$ oz. of Tincture of Gum Guaiacum.

1 do. Turmeric.

To be given in a gill of warm ale, and repeated every other day for 3 or 4 times, or as long as you see it necessary; but give none till the setter or seton runs.

If you do not think proper to use a setter or a seton, give the following.

2 drams of Jalap Powder.
2 do. Gum Guaiacum.
20 grains of Calomel.

Give the above in warm ale as the last. These are the likeliest things to be of service, but the disorder often continues very long—sometimes 10 or 12 weeks, which renders the cure worse than the disease. If a Calf is pretty full of flesh at the beginning of this complaint, it is best to take it to the shambles.

Another complaint that Calves are subject to is having too large a navel: this is chiefly owing to the navel-string being too long in breaking, or to catching cold where the navel-string enters the body; and sometimes it is caused by drawing the navel-string so tight that it breaks the inner rind, and causes the net to come into the skin. When you find a Calf disordered in the navel, mix

1 oz. of Oil of Turpentine.
1 do. Spirits of Hartshorn.
1 do. Oil of Bricks, or Sweet Oil.

Rub every day with it, and keep the Calf warm. Some are so fool-hardy as to cut the Calf, and put the net in again, and then sew up the rind.—This is a sure way to kill it, for in 3 or 4 days the stitches will give way, and the bowels come down. The above mixture seldom fails to cure the disease; indeed it would per-

haps get better of itself, unless it came to matter and broke, in which case there would be great danger; but the mixture is to scale it away without breaking.

There is often a swelling in the cod, caused by the Gelder searing too hard, for which the above mixture is very useful. It is very easy to geld either a Bull calf or a Colt foal, yet some years since there were many Beasts twisted, as it is called, and in many places it yet happens. It is the Gelder's fault, and is caused by holding the strings of the testicles too tight in the clams, and searing too hard: if the strings were let go, and not seared so much, there would be no twisted Oxen; indeed, I do not see that there is any need to sear at all. If you sew the cod up with a square pointed needle, it will answer the purpose as well as searing, and then you will have no twisted Beasts. Pray what need is there for searing? there are no arteries nor strong veins in the way, but only small veins, and if the Calf should lose a little blood it will be no worse for it; but if you stitch the cod pretty close you need not fear much bleeding.

Any person who has had to do with twisted Beasts knows that it is owing to the Gelder. You say, *You are blaming the Gelder for not doing his duty, can you manage to geld so that the same accident will never happen.* This I can answer in a few words; *It never did, nor never will.* But what is the reason why Oxen get twisted, and how are they to be relieved? the reason of it, as I said before, is that the string is drawn too tight, and left so; so that when the Beast is laid and turns him-

self on his back, his bowels, or small intestines, go over the string, and cannot get back again; then comes on an inflammation if they are not soon put right.

Some time ago, Oxen were cut for this on the side a Cow is milked on, and at the same place where a Beast is cut for being swelled with clover, but on the contrary side, and the hole made large enough to admit a small hand; the string was then found with the bowels thrown over it; then the string was drawn from the cod or loins, whichever place gave way first; & then the place was sewed up, and a plaister laid on to keep out the air. This is the way they were put to rights formerly, and it continues in use yet in some places; but there has been a much readier and safer way in use of late years, which is to put the arm into the fundament to find the string. You cannot feel it bare, as there will be the fundament between it and your hand; but by pressure you will find it, for it will be tighter than any thing else: but you must observe that it will require a long arm to reach it in a large Beast. When you find the string, press upon it till it gives way, and then the work is done.

Sometimes Calves have **CONVULSION FITS**, and sometimes a **LOCKED JAW** also. When this happens you must bleed well, and give plenty of valerian root tea, with a little saltpetre and assafoetida in it; and foment the Calf's head well with Camomile, or the tops of elder, or both. Sometimes oil and spirits of hartshorn will answer the end. When you foment, or rub with the mixture, endeavour to open the mouth, that

the tendon may give way. There is not a greater grievance to any thing than convulsions, for every tendon is drawn when in the fits, and if the animal mends it is often lame or stupid.

THE FRENZY is a disorder something similar to the last. When a Calf is seized by it its eyes are red, it throws up its head and turns its eyes upward, turns about half way round, and falls down and lays still for a few minutes, but is not drawn in the tendons as in convulsions; it then froths a little at the mouth, and starts up again, not seeming to ail much till another fit comes on. It is hard to distinguish this disease from **Water in the Brain**. In the first place, bleed well, and then give

$\frac{1}{2}$ oz of Jalap Powder.

$\frac{1}{2}$ dram of Calomel.

1 oz. of Cream of Tartar.

All to be given together in a little warm water. Keeping low of blood, and physicing well are most proper for the Frenzy, but for **WATER IN THE BRAIN**, which is bad to cure, blistering behind the ears, or a rowel or setter underneath the chaps is most proper.

A HOOSE, or COUGH, is a very common disorder among Calves, and is often brought on by neglect, and sometimes by a sudden change from heat to cold; for when the weather has been very hot, and a cold thunder-storm comes on suddenly, the cold flies to the lungs, and is not easy to remove.

Calves sometimes eat a great deal of dirt, which inflames the lungs. By licking each other they gather hair into their second stomach, which forms itself into

a ball, and cannot pass the strait gut into the third stomach:—this sometimes happens to full-grown Beasts, and must be carried forward by oil of castor, or sweet oil. This disorder also happens by giving the pottage too hot, and is often the case when Calves are trusted to young girls. In any of these cases, (except the hair-ball) if you give tar, garlic and liquorice powder, wrought up together, it will be of great service. For a Cough, caused by cold, give the following.

1 oz. of Elecampane Powder.

1 do. Spanish Juice.

1 do. Salt of Tartar.

1 dram of Saffron.

Cut the juice small, dissolve it in hot water, and give all together—repeat it as needful for you can have no better recipe for Coughs and Colds in either man or beast.

There is another grievance which Calves are subject to, for which there is no relief, viz. their lights growing to the side; and when this happens they very often cough, and their flesh wastes away till death. Any thing that causes the lungs to swell is often bad to remove. Asthmatic complaints are brought on by disorders of the lungs.

I wish all Calf-Breeders to be careful of their rising stock, for disorders are easier prevented than cured. Young Calves are sometimes of a costive habit, which is a great grievance, and often brings on other disorders. This should be prevented, for, if a Calf is bound, and cannot part with its dung without much uneasiness, it prevents it thriving, and there is dan-

ger of it bringing on an inflammation in the small bowels. Proper diet is the best remedy for costiveness, as physic only relieves for a short time; but, if you do give physic, let it be oil of castor and glauher's salt, which are cooling and gently opening, for sharp physic both disorders the Calf and causes it to be soon bound again. Proper diet, such as rye-meal pottage and churn-milk with currants in it, will keep them open in the body, if given in time, but if you give plenty of linseed and milk, you will not be much troubled with this complaint.

Calves are sometimes swelled in the body, or paunch, that is, the first stomach, and often continue so for a long time, for it is a grievance that is not easy to remove. The paunch keeps rising and falling, and rolling continually. When the weather is fine and warm the Calves do not ail much; but when cold, they are blown up again, for they cannot bear cold. You may say *What is the reason that some Calves are well and others not, when they are all kept alike.* I answer, *All constitutions are not alike, neither are the internal parts of all of an equal strength, therefore what will do for one will not always do for another.* Although this disorder appears to the eye to be in the first stomach, yet it is in the second, which is called the slut-tripe. The passage from the second stomach to the third stomach, or manifold, is so strait that when the small intestines force wind back again into the fourth stomach, and the fourth into the third, the third presses so hard upon the second as to prevent the free course of both

wind and meat. But you will say *Why is the third stomach made so as not to contain them both without pressing upon the second?* I answer, *The food stays longest in the third stomach, as it goes through most digestion there, for which it is called the maw.* The slut-tripe, or second stomach, has many turnings, flaps and shelves, which make the food pass easier through the strait passage. The first stomach, or paunch, is the first receiver, and any thing that is course, or hard to digest, is thrown back to the mouth for a second grinding. The second stomach ferments it, and makes it fit to pass into the third. In the third stomach it becomes dung: and the fourth stomach, or the wide-gut, which is very spongy, separates the water from the dung. The great Creator of all things made every thing to suit its place: when the great temple at Jerusalem was building, the sound of a tool was not heard, and all things are yet ordered so as to answer the intended end.

In order to remove this disorder, keep the Calves from cold as much as you can, especially cold winds and rains, and when much swelled give the following.

$\frac{1}{2}$ oz. of Ginger, in powder.
 $\frac{1}{2}$ do. Senna.
 2 drams of Assafoetida.

All boiled together. Only just let them boil, and when nearly cold strain through a cloth, and give the liquor:—this seldom fails to do good, but, as soon as they catch a little cold they are blown up again. If you have Calves subject to this disorder, you should always have this mixture by you. The above is sufficient for two small Calves. Or use—

4 oz. of Juniper Berries.
 $\frac{1}{2}$ do. Senna.

Boil it as the last, and repeat either of them as needful. I have known tincture of senna be of great use in this complaint. To a strong Calf you may give 4 ounces of tincture of senna, or daffy's elixir, but be careful to let its food be of an opening nature, and given lukewarm.

Calves sometimes have the **RED-WATER** as soon as they are turned out to grass, but are much easier to cure than a full-grown Beast. I do not know a better medicine for it than rhubarb: the dose is from a quarter of an ounce to an ounce of India rhubarb, given in a little beer. Giving many medicines to Calves would be great folly; but in this disorder give them as much fresh mould as they will lick. Get the mould as before directed.

THE HYAN, OR MURRAIN has killed more young Beasts than all other disorders, and yet is the least understood. No Cattle-Doctor, or Cattle-Keeper that has lived either in my time or before me has ever found out a cure for it. Attempts have been made, and many things tried, but without effect; and I have tried many things myself. I have cut holes in the skin, about 4 inches from each other, all round the affected part, and rinded one hole into another, like setting a net round the part, to prevent it spreading; and then put in oil of turpentine and oil of origanum, softened with a little oil of elder. This has stopped the disorder in some, and they have mended of it, but it has left other complaints as bad, or worse.

I cut a Calf that had begun in the shoulder, and used the beforementioned oils, which stopped the disorder from spreading further; but the flesh and the shoulder-blade were so mortified that the shoulder-blade came out, and the Calf had only 3 legs to stand on afterwards: still it got fat about 12 months after; but if it had died at first the owner would not have lost so much by it, nor have been in danger of spreading the infection by cutting and letting out the foul air.

Of late years, people have gone up and down the country, where they knew there were many Calves bred, to cut the vein above the claws, pretending it would prevent them having the Hyan, and by this means made the Calves lame. Some of them had the impudence to charge two shillings a Calf, and others one. Quack-doctors and witch-doctors have both set their hearts to do evil for a little earthly gain. If the Calves miss having the disorder they say that cutting them has prevented it, when their own conscience tells them it is all a deception, and many weak people believe them. If you closely examine these pretenders, they cannot give you any satisfactory account of the cause of the disease, or how cutting prevents it. My dear friends, be careful against such impostors. When a Calf has begun in this disorder, there is no cure for it. Some people pretend that they have given such and such medicines, and wrought such and such cures, when at the same time they mistook some other disorder for the Hyan.

The symptoms of the Hyan are these.—The Calf lays much, and is lame in one quarter where a swelling

appears, and if you tap it with your fingers, it will sound hollow like a bladder; the Calf hangs its head, refuses its meat, and looks dull in the eyes: sometimes the complaint begins in the nostrils, and runs up into the head, and makes the Calf blind; and sometimes in the back, and kills it in a short time. Wherever the disease begins the Calf cannot live above a day or two, but if it strikes the jugular vein it soon causes death.

The Hyan seldom takes place before the Calf is 6 months old, and I advise all Calf-Breeders to give the following medicine at 6, 12 and 18 months old. Very few Calves have it before 6 months, or after 2 years.

This disorder is infectious, therefore as soon as you find a Calf in it remove the others from it; and when it is dead the safest way is to bury it as soon as possible; with the skin on, for if you take the skin off there is great danger of spreading the disorder. As far as it has gone you will find a mortified blackness under the skin, and if you cut the part affected while the Calf is alive it gives it no pain. I shall now give you one of the best medicines to prevent the Hyan, but not to cure it when it has begun. You must not think it has begun as soon as the Calf has received the infection, for it will be 10 days first. For one Calf take—

One dram and a half of Crocus metallorum, or Liver of Antimony.
 Half an ounce of dried Buck-bean. Half an ounce of Guaiacum
 Chips. Half an ounce of Sassafrass. Half an ounce of Gentian
 Root. Half an ounce of Juniper-berries. Half an oz. of Saltpetre.

The above (except the crocus metallorum) to be boiled in 3 pints of water for 10 minutes, and to stand till cold; then strain it off, and put the crocus metallo-

rum to it. Give the liquor fasting, and to fast 3 hours after, and bleed well as soon as you have given the drink. This medicine (as before observed) is to be given at 6, 12 and 18 months old. I have made some hundreds in a year, for 15 or 16 years, and none of the Calves that took them have had the Hyan, except such as had not the medicine given them in due time. Not one Calf need be lost between 6 months old and 2 years, if people would be careful to give them this medicine, and the expence is so little that I only charge sixpence a drink for them. I have known Farmers that bred 12 or 14 Calves in a year, and generally lost 5 or 6; but after they got the above medicine they scarcely lost one for 12 or 13 years.

If this little treatise be duly attended to it may be the most useful that has yet been printed. Much more might have been said upon Calves, but their other disorders are similar to those of full-grown Beasts, so that you have only to reduce the medicine to the strength of the Calf. Some learned people may sneer at my plain language, but plain language suits the bulk of mankind. I trust this little book will be of use to the rising generation as well as to the present; and I leave it just as it is, for I have hid nothing from the public that is useful that I know of, but my old age cannot be so quick of apprehension as the prime of life; however I thank my God that it is as well with me as with most of my fellow-creatures at the advanced age of 74 years; and if the Lord continues my life and health a little longer, I purpose to publish a small treatise upon Horses, shewing how to manage them on a journey, and how to cure them when out of health, with an engraved frontispiece, to point out every part of a Horse, and the proper names of them: also the Disorders to which Horses are subject, so that every man may be his own Farrier; which I hope will be as useful for Horses as this is for Cattle.

The Blane. Is when a Cow giving Milk takes cold, is known by swelling of the Body, Take some Blood, immediately and give 4 new laid Eggs with the shells beaten up, add to them a little cold water, keep the Cow warm.

A Blast in a Cows Bag is known by swelling, and getting hard. Foment with Hot water, for 24 hours or longer until the Bag becomes soft in its natural way - then rub the Bag with warm Flannel, but do not press hard to the Bag, until it is quite dry. Should the Cow wish to lay down during the time, put a cloth dipped in hot water to the Bag. Take a little Blood, give her food rather sparingly, may give a little Gruel.

To kill Lice &c. in Cattle.

Two penny worth of Staseacre, boiled in three pints of Chamberlain, applied rather warm.

To cure Stake or Stinking foul in a Cow's Wash the foot clean first, then mix together the White of an Egg (unboiled), a spoonful of wheat ~~flour~~ a little Salt, and a small quantity of Blue Vitriol, seldom needs applying more than twice.

Felon in a Cow.

Boil for 2 hours in 2 Quarts of
Water, $\frac{1}{2}$ lb of Rancid Bacon —
1 lb of Onions

2 lb of Currants

The Currants should only boil one hour
to be given to a cow fasting.

Scab in Sheep.

1 oz of Precipitate, Red, mixed to
 $\frac{1}{2}$ lb of Hogs Lard and heated over a
slow fire until well dissolved.

The above is sufficient for 12 Sheep
to be applied when cold on the ^{Back} ~~sides~~.

Rau or Looseness in a calf.

Give 1 Pint of Milk warm from the
cow, add 2 Tablespoonfuls of Treacle
which causes the Milk to curd on the Stomach
and stop the looseness.

